us-10-608-296-38.rge

AC003982 Homo se AC078926 Homo se X99593 M.muscull AX157583 Mus mud AC128066 Rattuu BX323576 Zebraf. AL73528 Mouse i BX571819 Zebraf. AC099634 Mus mud	BX247878 Zebrafish AC105464 Rattus no AC11936410 Rattus no AC119364 Rattus no AC128521 Rattus no AC059794 Rattus no	AV135687 Mus muscu AV135687 Mus muscu AC151470 Xenopus t AC06262 Homo sapi Continuation (9 of AY386265 Bovine pa	AC160234 Rhinoloph AC159925 Ateletix AC160564 Ateletix AC105201 Homo sapi AC016373 Homo sapi CR318635 Zebrafish AL354997 Human DNA	AL359218 Human chr AC103218 Rattus no AC007785 Homo sapi AL358792 Human DNA AL606976 Mouse DNA CR385076 Zebrafish AC024399 Homo sapi AL671173 Mouse DNA AC123163 Rattus no AC123163 Rattus no AC1231836 Rattus no AC162180 Mus muscu AC098768 Rattus no AC162180 Mus muscu AC162180 Mus muscu AC162180 Mus muscu AC162189 Rattus no AC162180 Mus muscu AC162189 Rattus no	AL596255 Mouse DNA AX658289 Sequence AE000659 Homo sapi AC134770 Homo sapi AC134770 Homo sapi AC153904 Bos tauru AF411807 Lycopersi AC139010 Homo sapi	ALGOBOT77 Human DNA ACUGSO177 Homos appi ALGOST72 Mouse DNA ACUGSO12 Zebraichsh ACUGBGGB Papio anu ACUGBGGB Papio anu ACUGBGST35 Homo sapi ACUGGST35 Homo sapi ACUGGGST35 Homo sapi ACUGGGGG Panio rer ACUGGGGG Panio mo ACUGGGGG Panio no ACUGGGGG Panio no ACUGGGGG Rattus no ACUGGGG Rattus no
0.0 122302 0.0 220384 14 4.4 7821 9 4.4 150089 14 4.4 163069 5 4.4 16665 9 4.4 16665 9 4.4 16665 9	17 94.4 190715 5 17 94.4 203746 14 17 94.4 2333 14 17 94.4 234063 14 17 94.4 250548 14 17 94.4 250548 14 1.0 94.4 250335 14	6.4 91.1 64211 9 6.4 91.1 64211 9 6.4 91.1 107573 14 6.4 91.1 110000 15 6.4 91.1 134431 13	6.4 91.1 138685 14 6.4 91.1 150564 14 6.4 91.1 151032 8 6.4 91.1 151032 14 6.4 91.1 152106 14 6.4 91.1 154312 5 6.4 91.1 156032	91.1 160718 8 91.1 1663443 14 91.1 1665931 8 91.1 166931 8 91.1 172345 9 91.1 1201741 9 91.1 201741 9 91.1 221345 14 91.1 22135 14 91.1 221392 14 91.1 221392 14 91.1 221392 14	6.4 91.1 251096 9 6.4 91.1 251199 6 6.4 91.1 251199 6 6.4 91.1 268342 14 16 88.9 62715 8 16 88.9 89666 14 16 88.9 101083 14	16 88.9 12771 8 ALS90677 16 88.9 127716 8 AC005077 16 88.9 142614 9 AL935172 16 88.9 145472 14 AC145793 16 88.9 165334 8 AC098698 16 88.9 165334 14 AC055735 16 88.9 165334 14 AC055735 16 88.9 174738 14 CR847521 16 88.9 196703 14 AC08290 16 88.9 232009 14 AC018297 16 88.9 244521 14 AC037177 16 88.9 244521 14 AC037177 16 88.9 244928 14 AC037177 16 88.9 244928 14 AC037159 16 88.9 24928 14 AC037177 16 88.9 24928 14 AC037177 16 88.9 24928 14 AC037177 16 88.9 24313 14 AC133759 15 4 85.6 433 2 AY552482
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n 5.1.8 Biocceleration Ltd. arch time 1978 Seconds (without alignments)	81 Million cell updates/sec	Jext 1.0 3421725653 residues chosen parameters: 11766282				G67500 csnppla2glb C0922146 Sequence Ax377240 Sequence CS071001 Sequence CQ723247 Sequence AX332734 Sequence AX333340 Sequence AX333340 Sequence AX333340 Sequence AX333440 Sequence AX33341 Sequence AX33341 Sequence AX33341 Sequence AX33341 Sequence AX3477262 Sequence BD20999 Human nuc AX014213 Sequence CS071209 Sequence CS071209 Sequence AX014213 Sequence CX01209 Sequence AX014213 Sequence AX014213 Sequence AX014213 Sequence AX014213 Sequence AX1377259 Sequence

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Hominidae; Homo.
1 (bases 1 to 357)
Wong,G.K.S., Yu,J., Yang,Z., Passey,D., Kibukawa,M., Paddock,M. and
Olson,M.
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                               Genome Center
University of Washington
Fluke Hall, Box 352145, Seattle, WA 98195, USA
Tell 206/685-7348
Fax: 206/685-7348
Email: gksw@u.washington.edu
Primer A: AAGGATCTTGGCGAAGTCAT
Primer B: AAAGGACACTGCCCAGAA
STS size: 357
                                                          Gene based polymorphism discovery Unpublished (2000)
                                                                                         Contact: Gane Ka-Shu Wong
Homo sapiens
                                                                                                                                                                                                                                                   Protocol:
ORGANISM
                                                            TITLE
JOURNAL
COMMENT
                                  REFERENCE
AUTHORS
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BC056207 Mus muscu
BC056207 Mus muscu
BC056207 Sequence
AE200739 Arabidops
BK68228 Mouse DNA
AX346620 Sequence
AL606838 Homo sapi
AL60834 Caenchabdi
AL659619 Sequence
AL101042 Mus muscu
AC101042 Mus muscu
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AC031229 Human DNA
AC134691 Homo sapi
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AC134691 Homo sapi
AC134690 Danio rer
AC138009 Danio cer
AC10839 Human DNA
BC66337 Homo sapi
AC10839 Human DNA
BK649475 Mouse DNA
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Continuation (4 of
CR753903 Danio rer
Continuation (3 of
Continuation (16 o
Continuation (16 o
       BV440988 S237P618R
BV244307 S234P6348
BV642275 S215P6066
BV560086 gta22£03.
AF202523 Pogonomyr
AF202524 Pogonomyr
                                                              BV625973 S217P6147
BV572948 G591P6003
BV608757 S217P6060
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AP008214 267
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AC161817_3
CR753903_0
                BV244307
BV6462086
AF202524
BV625973
BV628973
BV608757
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BV608757
BV608757
BV60875
AX506875
AX5077601
CEF10B5
AX5077601
CEF10B5
AX508019
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ACC087621
ACC084120
ACI01742
ACI34691
ACI33630
ACI46380
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HSJ1069P2
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AC134303
AL158171
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G31218
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RESULT 1
G67590
c 144
c 145
c 146
147
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Presoak:92 degrees C for 1.00 minute Denaturation:92 degrees C for 0.16 minute Annealing:60-65 degrees C for 0.50 minute PCR Cycles:35 Thermal Cycler:Perkin Blmer TC

: 7 ng each 0.5 uM each 100 uM merase: 0.025 units/ul 1: 10 ul

Template: Primer: dNTPs:

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PAT 23-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CQ922146 418 bp DNA
Sequence 3346 from Patent WO2004097052.
CQ922146 GI:56212087
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1. .357

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KCl: 50 mM
Tris-HCl: 10 mM
PH: Location/Qualifiers
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Taq Polymerase:
Total Vol:
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Homo sapiens
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ORIGIN
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CQ922146
LOCUS
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G67590 G67590.1 GI:12642952 STS. Homo sapiens (human)

ACCESSION VERSION KEYWORDS SOURCE

LOCUS DEFINITION

Gaps

. 0

PAT 03-FEB-2004

TITLE JOURNAL

FEATURES

REFERENCE AUTHORS

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Venter, C.J., Adams, M.C., Li, P.W. and Myers, E.W.
Kits, such as nucleic acid arrays, comprising a majority of
humanexons or transcripts, for detecting expression and other uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 562)
Cocks, B.G., Stuart,S.G. and Seilhamer,J.J.
Compositions for the detection of blood cell and immunological
response gene expression
Patent: US 6607879-A 1200 19-AUG-2003;
Incyte Corporation; Palo Alto, CA
Location/Qualifiers
                                                                                                                                                                              Length 496;
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100.0%; Pred. No. 59;
cive 0; Mismatches 0;
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  Patent: WO 2001032927-A 164 10-MAY-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR380655 562 bp DNA Sequence 1200 from patent US 6607879.
                                                                                                                                                                                                                                                                                                                                                                                                  CQ723247 559 bp DNA Sequence 9181 from Patent WO02068579.
                                                                                                                                                                      / Match 100.0%; Score 18; DB Local Similarity 100.0%; Pred. No. 59; ies 18; Conservative 0; Mismatches
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                              organism="Homo sapiens"
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/mol_type="genomic DNA"
                    Incyte Genomics, Inc. (US)
   Location/Qualifiers
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Location/Qualifiers
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CQ723247.1 GI:42284104
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AR380655.1 GI:40088289
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nes 18; Conservative
                                                           1. .496
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AUTHORS
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Matches
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TITLE
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KEYWORDS
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AR380655
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                                         FEATURES
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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                                                                          Burczynski, M.E., Twine, N.C., Slonim, D.K., Trepicchio, W.L., Strahs, A., Immerman, F. and Dorner, A.J.
Methods for prognosis and treatment of solid tumors
Patent: Wood 2004097052-A 3346 11-NOV-2004;
Wyeth (US); Burczynski, Michael E. (US)
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                    6; Length 418;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kazemi, A., Kliem, S.E. and Koshy, B.
Haplotypes of the pla2glb gene
Patent: WO 0212562-A 2 14-FEB-2002;
Genalssance Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                    100.0%; Score 18; DB 100.0%; Pred. No. 60;
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Sequence 2 from Patent WO0212562.
AX377240
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                                                                                                                                                                                               1. .418
                                       Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                       Local Similarity
ses 18; Conserv
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ACCESSION VERSION KEYWORDS SOURCE ORGANISM

DEFINITION

RESULT 3 AX377240 LOCUS

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PAT 18-DEC-2003

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DEFINITION ACCESSION VERSION

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RESULT 7 AX332734 LOCUS

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REFERENCE AUTHORS JOURNAL

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REFERENCE AUTHORS JOURNAL

ORIGIN

TITLE

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Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G., Horrigan, S., Soppet, D.R. and Weaver, Z. Cancer gene determination and therapeutic screening using signature gene sets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 полигыагка 562 bp mRNA linear PRI 03-JUN-1994
Human lung phospholipase A-2 (PLA-2) mRNA, complete cds, clone
lung-1(hcDNA).
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1 (bases 1 to 562)

2 (bases 1 to 562)

Seilhamer.J.J., Fandall,T.L., Yamanaka,M. and Johnson,L.K.
Pancreatic phospholipase A2: isolation of the human gene and cDNAs from porcine pancreas and human lung

DNA 5 (6), $19-527 (1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parent: WO 0194629-A 4252 13-DEC-2001;
Avalon Pharmaceuticals (US)
Location/Qualifiers
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100.0%; Pred. No. 59;
iive 0; Mismatches
                       Pred. No. 59;
Mismatches

    .562
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

100.08; Pri
                                                                                                                                              313 CCACACCTATTCATACTC 330
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M21054.1 GI:190012
phospholipase A2.
Homo sapiens (human)
Homo sapiens
                                                                                                          1 CCACACCTATTCATACTC
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Homo sapiens
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Best Local Similarity 100.
Matches 18; Conservative
                                                     18; Conservative
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                          Best Local Similarity
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ACCESSION
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HUMPLA2RA
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KEYWORDS
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AX333743
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G., Horrigan, S., Soppet, D.R. and Weaver, 2. Cancer gene determination and therapeutic screening using signature
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                              Gaps
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                                                                            core 18; DB 6; Length 562;
red. No. 59;
Mismatches 0; Indels
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100.0%; Score 18; DB 6; Length 562;
Best Local Similarity 100.0%; Pred. No. 59;
Matches 18; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                linear
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Patent: WO 0194629-A 3243 13-DEC-2001;
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Avalon Pharmaceuticals (US)
Location/Qualifiers
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Seguence 3849 from Patent WO0194629.
AX333340
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Sequence 3243 from Patent WO0194629.
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/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                               Query Match
100.0%; Score 18;
Best Local Similarity 100.0%; Pred. No. E
Matches 18; Conservative 0; Mismatche
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Location/Qualifiers
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AX332734.1 GI:18123368
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AX333340
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DEFINITION
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ACCESSION
VERSION
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SOURCE
ORGANISM
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PAT 18-MAR-2002
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Human nucleic acid sequence originating in normal pancreas.
BD209899
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Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,

    120
    note="Ns represent sequence between polymorphic sites"

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1 (Dases 1 to 644)
Specht,T., Hinzmann,B., Schmitt,A., Pilarsky,C., Dahl,E. and
Rosenthal,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human nucleic acid sequence originating in normal pancreas
Patent: JP 2002512022-A 3 23-ARR-2002;
METAGEN GESELLSCHAFT FUER GENOM FORSCHUNG MBH
OS Human sapiens (human)
PN JP 2002512022-A/3
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                                                             linear
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/note="Ns represent sequence between
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100.0%; Pred. No. 58;
tive 0; Mismatches 0;
                                                          DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                        AX377262 600 bp
Sequence 24 from Patent WO0212562.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
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JP 2002512022-A/3.
Homo sapiens (human)
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                                                                                                                                                                                     Homo sapiens (human)
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Best Local Simil
Matches 18;
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                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                        LOCUS
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     RESULT 12
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/protein_id="AAA36450.1"
/db_xref="G1:190013"
/fcmslation="MKLLVAVLLTVAAADSGISPRAVWQFRKMIKCVIPGSDPFLEY
NNYGCYCGLGGSGTPVDELDKCCQTHDNCYDQAKKLDSCKFLLDNPYTHTYSYSCSGS
AITCSSKNKECEAFICNCDRNAAICFSKAPYNKAHKNLDTKKYCQS"
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/product='human phospholipase A2 precusor' FT
.90
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases tro 569)

Tamaki, M., Takimoto, N., Nakamura, E., Teraoka, H., Ogawa, M. and Matsubara, K.

Matsubara, K.

PRODUCTION OF PHOSPHOLIPASE AZ OF HUMAN PANCREAS

PARENT: JP 1990065781-A 1 06-MAR-1990;

SHIONOGI & CO LID

OS Homo sapiens

PN JP 1990065781-A/1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PI TAMAKI MIKIO, TAKIMOTO NORIKO, NAKAMURA ETSUO, TERAOKA HIROSHI, PI OGAMA MICHIO, MATSUBARA KENICHI
PC C12N9/18/C12N15/55, (C12N9/18, C12R1: 865);
CC strandedness: Double;
CC topology: Linear;
CC hypothetical: No;
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                                                                                                                                                                                100.0%; Score 18; DB 8; Length 562; 100.0%; Pred. No. 59; cive 0; Mismatches 0; Indels
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*source: tissue_type=pancreas;
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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Location/Qualifiers
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Homo sapiens (human)
Homo sapiens
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Human pancreatic phospholipase A-2 (PLA-2) gene, exons 1 to 3. M22970 M14965
phospholipase A2.
1 of 2
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the human gene and cDNAs
                 Homo sapiens
Wakaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
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Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
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Location/Qualifiers
1. 3375
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/map="12q23-qter"
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Sornasse,T., Seilhamer,J.J. and Watson,G.A.
Tissue specific genes of diagnostic import
Patent: WO 2001032927-A 372 10-MAY-2001;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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1 (bases 1 to 3375)
Seilhamer.J.J., Randall,T.L., Yamanaka,M.
Pancreatic phospholipase A2: isolation of
from porcine pancreas and human lung
DNA 5 (6), 519-527 (1986)
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537 570
fore=="PLAS"
/note="G00-120-715"
                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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/gene="PLA2A"
/note="G00-120-715"
/number=3
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/gene="PLA2A"
/note="G00-120-715"
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/gene="PLA2A"
/note="G00-120-715"
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/gene="PLA2A"
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Homo sapiens
Homo sapiens (human)
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                                                                                                                                                                        Human nucleic acid sequence originating in normal pancreas. FH
Location/Qualifiers
     23-APR-2002
08-APR-1999 JP 2000544778
19-APR-1998 DE 198 18 598.7
THOMAS SPECHT, BERND HINZMANN, ARMIN SCHMITT, CHRISTIAN PILARSKY,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human nucleic acid sequences from normal pancreas tissue Patent: WO 995446-A 6 28-OCT-1999; SCHMITF ARMIN (DE); SPECHT THOMAS (DE); DAHL EDGAR (DE); HINZMANN BERND (DE); ROSENTHAL ANDRE (DE); METAGEN GES FUER GENOMFORSCHUN (DE); PILARRYX CHRISTIAN (DE)
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 PD 23-APR-2002
PP 08-APR-1999 JP 2000544778
PR 19-APR-1999 DE 198 18 598.7
PI THOMAS SPECHT, BERND HINZMANN, ARMIN SCHMITT, CHRISTIAN PILARS PI EDGAR DAHL,
PI ANDRE ROSENTHAL
PC CI2N15/09, CO7K14/47, CO7K16/18, CI2N1/15, C12N1/19, C12N1/21, C12N5/
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Pilarsky,C.
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Sequence 372 from Patent WO2001032927.
CS071209.1 GI:63088613
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                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches

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Sequence 6 from Patent WO9954446.
AX014213
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Best Local Similarity 10v...
Best Local Similarity 10v...
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NNYGCYCGLGGSGTPVDELDKCCQTHDNCYDQAKKLDSCKFLLDNPYTHTYSYSCSGS
AITCSSKNKECEAFICNCDRNAAICFSKAPYNKAHKNLDTKKYCQS"
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1 (bases 1 to 8368)

1 (bases 1 to 8368)

Richar, M.J., Livingston, R.J., Daniels, M.R., Chung, M.-W.,

Miyamoto, K.E., Nguyen, C.P., Nguyen, D.A., Poel, C.L., Robertson, P.D.,

Schackwitz, W.S., Sherwood, J.K., Witrak, L.A. and Nickerson, D.A.

Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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join(911. .944,2644. .2803,3603. .3730,6347. .6471)
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db_xref="GI:37953285"
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                                                                                                                                                                        Query Match 100.0%; Score 18; DB 8; Length 3375; Best Local Similarity 100.0%; Pred. No. 51; Matches 18; Conservative 0; Mismatches 0; Indels
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3351. .>3375
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                                                                                          /number=3
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AUTHORS
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Gaps

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PAT 18-MAR-2002

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ACU013982 122302 bp DNA linear PRI 18-MAR-1999
Homo sapiens PAC clone 166H1 from 12g, complete sequence.
AC0013982
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Bradshaw, H., Wu, X. and Ozersky, P.
The sequence of Homo sapiens PAC clone 166H1
Unpublished (1999)
3 (bases 1 to 122302)
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(bases 1 to 122302)
Sulston, J.E. and Waterston, R.
Toward a complete human genome sequence
Genome Res. 8 (11), 1097-1108 (1998)
                                                                                                                                                                                                                                                                                                                             Kazemi, A., Kliem, S.E. and Koshy, B.
Haplotypes of the pla2glb gene
Patent: WO 0212562-A 1 14-FEB-2002;
Genalssance Pharmaceuticals, Inc. (US)
Location/Qualifiers
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Pred. No. 48; Mismatches
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3845
                                                                                                                                                    Sequence 1 from Patent W00212562.
AX377239
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                                                              3684 CCACACCTATTCATACTC 3701
Best Local Similarity 100.0%; P:
Matches 18; Conservative 0;
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(PID:g927403) (PID:g927402); H_166H1.1"
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|oin(4560. .5056,13418. .13748,13882. .14034)
|gene="WUGSC:H_166H1.1"
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?790. .3077
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5870. .6184
                       1955. .1983
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6269. .6548
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3081. 3139
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3716. 4020
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/rpt_family="Alu"
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.0408. .10707
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This clone was derived from human PAC library RPCI-1, prepared by Pieter de Jong and coworkers at the Roswell Park Cancer Institute (http://bacpac.med.buffalo.edu) using the method described by Ioannou et al., Nature Genetics 6:84-9 (1994). The library is from one male donor.
                                                                                                                                      Submitted (18-MAR-1999) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA SUBMITTED BY: WIGGC Genome Sequencing Center Department of Genetics Washington University St. Louis MO 63108, USA http://genome.wustl.edu/gsc
                       Direct Submission

Direct Submission

(13.40A-1998) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA

4 (bases 1 to 122102)
                                                                                                                                                                                                                                                                                                                                             NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The clone may be obtained either from Genome Systems, Inc. (http://www.genomesystems.com) or Research Genetics, Inc. (http://www.resgen.com); or from Pieter de Jong.
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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NEIGHBORING SEQUENCE INFORMATION:
                                                                                                                                                                                                                                                                                                          mailto:sapiens@watson.wustl.edu
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1. .238
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239. .265
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1909. .1940
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JOURNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo.

I (Dases I to 22034)

Muzny, D.M., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alabbrooks, S.L., Amaratunge, H.C., Are, J.R., Ayele, M., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Buhay, C., Burch, P., Burket, C., Burrell, K.L., Brydd, N.C., Carron, T.F., Carter, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, R., Chen, Z., Chowdhry, I., Christopoulos, C., Chen, R., Chen, Z., Cole, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Davy-Carroll, L., Dederich, D.A., Delaney, K.R., Delgado, D., Denn, A.L., Ding, Y., Dinh, H.H., Douthwaite, K.J., Draper, H., Dugan-Rocha, S., Durbin, K.J., Earnhart, C., Edgar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Carrell, A., Gao, J., Garcia, A., Garner, T., Garza, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Hamilton, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC078926 220384 bp DNA linear HTG 26-MAR-2002
HOMO Bapiens chromosome 12 clone RP11-836M11, WORKING DRAFT
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                                                                                                                                                                                                                                                                                                                                                                                                                             complement (13674. .13752)
/notes"match to BST N80020 (NID:g1242721) za91a08.sl"
complement (13840. .14195)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(13840. .14195)
'note="match to EST N80020 (NID:g1242721) za91a08.81"
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100.0%; Score 18; DB 8; Length 122302;
Best Local Similarity 100.0%; Pred. No. 40;
Matches 18; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family="AT_rich"
                                                                                                                                                                                                                                                              family="7SLRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1434<u>9</u>, .14646
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1465<u>2</u>, .14940
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                /rpt_family="Alu"
111146. .11386
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11208. .11386
                                                                                                                                                                                                                                                                               5. .12372
family="Alu"
3. .12753
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8. .11705
family="Alu"
                                                                                                                                                                                                   7. .12032
family="Alu"
4. .12066
                                                                                                                                                                                                                                                                                                                                           family="Alu" . .12874
                                                                                                                                                                                                                                                                                                                                                                                                    12999. .13303
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complement(13674.
                                                                            11<u>208</u>. .11386
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11391. .11515
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                                                                                                                                                                                                                                                                                                                                                                                     family="L2"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4196. .14229
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11737.
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2075.
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AC078926/c
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VERSION
KEYWORDS
SOURCE
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Harris, C., Harris, K., Hart, M., Havlak, P., Hawes, A., Hernandez, J., Hernandez, O., Hodgson, A., Hogues, M., Holloway, C., Hollins, B., Homandez, S., Home, J., Jackson, E., Gobson, B., Jia, Y., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratosci, J., Lichtarge, O., Liu, J., Liu, W., Loulseged, H., Lozado, R.J., Lichtarge, O., Liu, J., Liu, W., Loulseged, H., Maheshwari, M., Mapua, P., Martindale, A., Martinez, E., Massey, E., Mawhiney, E., Martindale, A., Martinez, E., Miner, G., Miner, Z., Mitchell, T., Mohabbat, K., Morgan, M., Morris, S., Miner, G., Miner, Z., Mitchell, T., Mohabbat, K., Morgan, M., Moyen, N., Nauyen, N., Nauyen, N., Nauyen, N., Nauken, S., Oguh, M., Okwionu, G., Peters, L., Pickens, R., Pance, A., Payton, B., Peery, J., Perez, L., Outled, M., Okwionu, G., Scherer, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Stoker, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Sutton, A., Savatek, A., Tabor, P., Tamerisa, A., Tamerisa, R., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Ward-Moore, S., Warren, R., Wandhigton, C., Wang, S., Wart, W. War, Wu, Y., Walliams, G., Wallington, C., Wang, S., March, R., Stoke, S., Wart, R., Walliahed, S., Wart, R., Walliahed, S., March, R., Walliahed, S., Natliahed, S., Natliahed, S., March, R., Walliahed, S., March, R., Walliahed, S., March, R., Walliahed, S., March, R., Walliahed, S., Walliahed, S., March, R., Walliahed, S., Walliahed, S., Walliahed, S., March, R., Walliahed, S., Wallia
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Center clone name: RP11-836M11

Center clone name: RP11-836M11

Sequencing vector: Plasmid;
Sequencing vector: M13,
Sequencing vector: M13,
Chemistry: Dye-terminator Big Dye: 53% of reads
Chemistry: Dye-terminator Big Dye: 53% of reads
Assembly program: Phrap; version 0.990329
Consensus quality: 234783 bases at least Q40
Consensus quality: 24821 bases at least Q30
Consensus quality: 245671 bases at least Q20
Estimated insert size: 219187, sum-of-contigs estimation
Quality coverage: 8.9x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        * NOTE: Estimated insert size may differ from sequence length

* See http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a 'working draft' sequence. It currently

* consists of 11 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
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Direct Submission
Submitted (11-AUG-2000) Human Genome Sequencing Center, Department
Submitted (11-AUG-2000) Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 220384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (26-MAR-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA DAMAR 26, 2002 this sequence version replaced gi:18449664.

Center: Baylor College of Medicine
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Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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SAGSDSLGSTYSINGLIGIAQPGNDNKRKNDDSDQDSCRLSIDSQSSSGGRKHLRTD
TFSQHHLEALECPFERQHYPEAYASPSHTKGEQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AY157583 7821 bp DNA linear ROD 24-NOV-2002
Mus musculus transcription factor Pax8 gene, exons 3 through 7 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 7821)
Bouchard,M., Souabni,A., Mandler,M., Neubueser,A. and Busslinger,M.
Nephric lineage specification by Pax2 and Pax8
Genes Dev. 16 (22), 2958-2970 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 7821)
Maxime, B., Abdallah, S., Markus, M., Annette, N. and Meinrad, B.
Direct Submission
Submitted (01-0CT-2002) Research Institute of Molecular Pathology,
Dr. Bohr-Gasse 7, Vienna A-1030, Austria
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia,
Sciurognathi, Muroidea, Muridae, Murinae, Mus.
                   2 (bases 1 to 463)
Okladnova.O.
Direct Submission
Submitted (18-JUL-1996) O. Okladnova, Institut fuer Humangenetik,
Uni Muenster, Vesaliusweg 12-14, D- 48149 Muenster, Germany, FRG
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         join(<3063. 3228,4657. 4854,6114. 6202,6591. 6716,
6979. >7154)
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join(<3063. 3228,4657. 4854,6114. .6202,6591. .6716,
5979. .>7154)
codon_state3
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                                                                                                                                                                                                                                                                                                                                                                                                                            ch 94.4%; Score 17; DB 9; Length 463; I Similarity 100.0%; Pred. No. 2.2e+02; 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .7821
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                                                                                                                                                                                                                           chromosome≈"2B"
                                                                                                                                                                                                                                        | 112. .277
|/gene="Pax-8"
| 112. .277
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Best Local Similarity
Matches 17; Conserv
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  9205117
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PUBMED
REFERENCE
AUTHORS
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KEYWORDS
SOURCE
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AY157583
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pax-8 gene.
Mus musculus (house mouse)
Mus musculus
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Musinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%; Score 18; DB 14; Length 220384; Best Local Similarity 100.0%; Pred. No. 38; Matches 18; Conservative 0; Mismatches 0; Indels 0;
              13283: contig of 6071 bp in length 13383: gap of unknown length 20760: gap of unknown length 20760: gap of unknown length 3473: contig of 13713 bp in length 34573: gap of unknown length 44394: contig of 9821 bp in length 4494: gap of unknown length 57126: contig of 12632 bp in length 57226: gap of unknown length 67226: gap of unknown length 109398: contig of 23040 bp in length 109498: gap of unknown length 109498: gap of unknown length 149812: contig of 40314 bp in length 149812: contig of 40314 bp in length 149912: gap of unknown length 149912: contig of 40314 bp in length 149912: gap of unknown length
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  length
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44395. 44494
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K99593
                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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/estimated_
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7113
7213
13284
13384
20661
20761
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149813
149913
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44395
44495
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SOURCE
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MMPAX83
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Sturrogatanı, Murzades; Murzade; Rattus.

Sturrogatanı, Murzades, Murzades; Rattus.

Muzny, D. Marzie., Merzker, M.Lee., Abramzon, S., Adams, C., Allen, H., Alabrooks, S., Amin, A., Angulano, D.,

Anyalebechi, V., Allen, H., Angulano, E., Barder, H., Bardwin, Benahmed, F.,

Baldwin, D., Bandaranaike, D., Barber, M., Barnatead, M., Benahmed, F.,

Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M.,

Cardenay, V., Carter, K., Cavazos, I., Ceasar, H., Center, D. Souza, L.,

Chacko, J., Chavez, D., Chen, G., Corle, M., Chen, Y., Chen, Z.,

Chacko, J., Chavez, D., Chen, G., Corle, M., Cree, A., D'Souza, L.,

Davila, M.L., Dugar, Rocha, S., Durn, A., Durbin, K., Duval, B., Eaves, K.,

Egan, A., Escotto, M., Bugene, C., Evans, C., Falls, T., Falls, T.,

Fraser, C.M., Gabisi, A., Ganta, R., Garcia, A., Garrar, T., Garza, M.,

Gunzarie, P., Haaland, M., Hamil, C., Hamilton, K., Harrandez, S., Filly, M., Flaggy, N., Guerra, M., Guevara, M.,

Gunzarie, P., Haaland, M., Hamil, C., Hamilton, K., Harrandez, S., Hulyk, S., Hum, J., Iday, M., Harvak, P., Havdak, P., Hulyk, S., Hume, J., Idlebird, D., Jackson, A.,

Jackson, L., Jacob, L., Jiang, H., Johnson, B., Johnson, R., Jolivet, A.,

Kapathy, S., Kally, S., Kally, S., Kama, Z., King, L., Kovar, C.,

Liu, W., Liu, W., Liu, Y., Londar, P., Levan, J., Levas, J., Marchandez, J., Lu, M., Liu, W., Lu, W., Manling, P., Martin, R., Martinez, E., Mandun, A.,

Maheshwari, M., Mahindartne, M., Mahmoud, M., Malloy, K., Mangum, A.,

Mandyam, B., Martin, K., Martin, R., Martinez, E.,

Mandyam, B., Martin, K., Martin, R., Martinez, E.,

Mandyam, B., Martin, K., Martin, R., Martinez, S., Parks, K.,

Pasternak, S., Paul, H., Perez, A., Perez, J., Perez, M., Perez, J., Perez, M., Perez, J., Perez, M., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC128066 150089 bp DNA linear HTG 20-NOV-2002
Rattus norvegicus clone CH230-465J23, WORKING DRAFT SEQUENCE.
AC128066
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Rattus.
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HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2975 CACACCTATTCATACTC 2991
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/number=6
                                                                                                                 6114. .6202
/number=5
                                                   4657. .4854
/number=4
                                                                                                                                                                                                                                         6979. .7154
/number=7
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AC128066/c
LOCUS
DEFINITION
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VERSION
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Query Match

Matches

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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em: EMBL; Sw., SWISSPROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP database can be found a to associate primary accession numbers given the RPCI-23 Mouse PAC Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALT32528 166465 bp DNA linear ROD 07-SEP-2002
Mouse DNA sequence from clone RP23-218B17 on chromosome 2, complete
sequence.
                                                                                           Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Sthrong Bao and Sean Eddy, submitted), and those beginning 'drr' were identified by Rick Waterman (Stephen Johnson lab, WashU). For further information see http://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml DKEYP-77A12 is from a Zebrafish BAC library VECTOR: pIndigoBAC-5.
length of mononucleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (06-SEP-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquirises: humquery@sanger ac.uk Clone requests: clonerequest@sanger.ac.uk On Sep 12, 2002 this sequence version replaced gi:22213682.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 163069;
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Best Local Similarity 100.0%; Pred. No. 1.4e+02;
Matches 17; Conservative 0; Mismatches 0;
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Center: Wellcome Trust Sanger Institute
                                                                                                                                                                                                                                                                                                                                                     1. .163069
/organism="Danio rerio"
/mol_type="genomic DNA"
/db_xref="taxon:7955"
/clone="DKEXP-77A12"
/clone_lib="DanioKeypilot"
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Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
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Oliver, K.
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HTG.
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                                        this is
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AL732528/c
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KEYWORDS
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This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, EMBLS Sw:, SWISSEROT; Tr:, TREMBL; WORWPEP; Information on the WORMPEP database can be found at the WORMPEP database can be found at the WORMPEP (subclones occasionally display inconsistency over the
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Submitted (27-MG-2004) Wellcome Trust Sanger Institute, Hinxton,
Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Aug 27, 2004 this sequence version replaced gi:50724700.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Actinopterygii, Neopterygii, Teleostei, Ostariophysi, Cypriniformes, Cyprinidae, Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163069 bp DNA linear VRT 27-AUG-200
Zebrafish DNA sequence from clone DKEYP-77A12 in linkage group 7,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
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                                                                                                                                                                                                                                                                                                                                                     complement (146702, .147615)
/note="clone_boundary
clone_end:T7
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Contact: zfish-help@sanger.ac.uk
                                                                                                                                                        end_sequence:RXBNK60TVB"
4927. .5712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         end_sequence:RXBNK60TJB"
                                                                                                                                                                                                                                                                                                                              end_sequence:RXBNK60TV"
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clone_end:Sp6
                                     4927. .5761
/note="clone_boundary
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clone_end:Sp6"
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                                                                                              clone_end:Sp6
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SOURCE

AUTHORS TITLE JOURNAL

COMMENT

REFERENCE

DEFINITION

ACCESSION

VERSION KEYWORDS

RESULT 24 BX323576

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Gaps

Gaps

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Linton, L. Musbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chasg. A., Cook, A., Cooke, P., Dalangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., Dalangelo, M., Cage, D., Galagan, J., Gardyna, S., Ginde, S., Govete, M., Gardam, J., Gardyna, S., Ginde, S., Govete, M., Gardam, J., Gardyna, S., Ginde, S., Govete, M., Gardam, M., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Landers, T., Lehoczky, J., Levine, K., Liu, G., MacCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., McReus, C., Norman, C.H., O'Connor, T., Naylor, J., Naylor, J., Nguyen, C., Norman, C.H., O'Connor, T., O'Donnell, P., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Santos, R., Stange-Thomann, N., Stojanovic, N., Stanas, J., Vo, A., Wilson, B., Wu, X., Wwyan, D., Ye, W.J., Young, G., Connon, W., Manga, J., Tesfaye, S., Theodore, J., Viel, R., Yoo, A., Wilson, B., Wu, X., Wwyan, D., Ye, W.J., Young, G., Connon, W., Landers, R., Wilson, B., Wu, X., Wwyan, D., Ye, W.J., Young, G., Cannon, J., Zanbek, L., Zimmer, A. and Zody, M. Trigillo, J., Wasailiev, H., Direct, Submission, M., Waller, A., Mang, J., Tentir, L., Landers, M., Thender, A., Mang, J., Landers, M., Travere, M., Submission, M., Mang, J., Tesfaye, S., Theodore, J., Viel, R., Mang, M., Submission, M., Submission, M., Submission, M., Submission, M., Wasailiev, H., Submission, M., Warn, M., Submission, M., Wasailiev, H., Submission, M., Submission, M., Submissio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC099634 177551 bp DNA linear HTG 14-JUN-2003
Mus musculus clone RP24-126P14, WORKING DRAFT SEQUENCE, 19
beginning 'drr' were identified by Rick Waterman (Stephen Johnson lab, WashU). For further information see trtp://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml DKEY-259P7 is from a Zebrafish BAC library VECTOR: pindigoBAC-5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (16-NOV-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA 3 (bases I to 17751)
Burren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Buukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Collymore, A., Cook, A., Cook, P., Corum, B., DeArellano, K., Piaz, J., S., Dodge, S., Doolley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94.4%; Score 17; DB 5; Length 168648; 100.0%; Pred. No. 1.4e+02; ive 0; Mismatches 0; Indels 0.
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AC09634.2 GI:31745422
HTG, HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
MUS musculus (house mouse)
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                                                                                                                                                                                                                         1. .168648
/organism="Danio rerio"
/mol_type="genomic DNA"
/db_xref="taxon:7955"
/clone="DKEY-25997"
/clone_lib="DanioKey"
                                                                                                                                                                                           Location/Qualifiers
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AC099634
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The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em.; EMBL; Sw.; SWISSPROT; Tr.; TREMBL; Wp.; WORMPEP; Information on the WORMBEP database can be found at http://www.sanger.ac.uk/Projects/C elegans/wormpep Clone-derived zebrafish pUC subclones occasionally display inconsistency over the length of monouncleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above. This sequence was finished as follows unless otherwise noted: all
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Repeat names beginning 'Dr' were identified by the Recon repeat
discovery system (Zhirong Bao and Sean Eddy, submitted), and those
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
constructed by the group of Pieter de Jong.
For further details see http://www.chori.org/bacpac/home.htm
VECTOR: pBACe3.6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.4%; Score 17; DB 9; Length 166465;
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/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="texon:10090"
/chromosome="2"
/clone="RP23-218817"
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Contact: zfish-help@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                            /clone lib="RPCI-23"
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BX571839/c
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59411: contig of 11315 bp in length 59511: gap of 100 bp 70527: contig of 10106 bp in length 70627: gap of 100 bp 80578: contig of 9951 bp in length 80678: gap of 100 bp 9443: contig of 13665 bp in length 94443: gap of 100 bp 106090: contig of 11647 bp in length 106090: contig of 22811 bp in length 129001: contig of 22811 bp in length 129101: gap of 100 bp 17551: contig of 48450 bp in length 177551: contig of 48450 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="RPCI-24 Male Mouse BAC"
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2459. .13510
note="assembly_fragment"
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13611. .16664
'note="assembly_fragment"
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16765. 19485
'note="assembly_fragment"
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/note="assembly_fragment"
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.9586. .23382
note="assembly_fragment"
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|5199. .25298
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/note="assembly_fragment"
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7997. .48096
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59412. .59511
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note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="RP24-126P14"
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10396. .11093
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3483. .25198
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1621. .39389
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129002
129102
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                         Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Meldrin, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Ramasamy, U., Raymond, C., Retta, R., Ries, C., Rogov, P., Roman, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, W., Stojanovic, N., Stubbs, M., Vassillev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                    Submitted (14-JUN-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jun 14, 2003 this sequence version replaced gi:16947881.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NOTE: This is a 'working draft' sequence. It currently consists of 19 contigs. The true order of the pieces is not known and their order in this sequence record is
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f 100 bp
9 of 7769 bp in length
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Query Match

SOURCE ORGANISM

KEYWORDS

VERSION

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TITLE JOURNAL

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FEATURES

REFERENCE

RESULT 28 BX247878/c LOCUS DEFINITION

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203746 bp DNA linear HTG 13-NOV-2002
Rattus norvegicus clone CH230-25001, WORKING DRAFT SEQUENCE.
AC105464
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
                                                                                                                                                                             94.4%; Score 17; DB 5; Length 190715; 100.0%; Pred. No. 1.4e+02; ive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC105464.4 GI:24942074
HTG, HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                              /mol_type="genomic DNA"
/db_xref="taxon:7955"
1. .190715
/organism="Danio rerio"
                                                                                        /clone="CH211-26605"
/clone_lib="CHORI-211"
                                                                                                                                                                                                                                                                                                                  88799 CACACCTATTCATACTC 88783
                                                                                                                                                                                                                                                                            2 CACACCTATTCATACTC 18
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Best Local Similarity 100.
Matches 17; Conservative
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AC105464/c
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This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats, all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Ems., EMBL: Sw., SWISSROT; Tr., TREMBL; Wp., WORNPEP; Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C elegans/wormpep Clone-derived Length of monouncleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'drr' were identified by Rick Waterman (Stephen Johnson lab, WashU). For further information see thtp://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml CH211-26605 is from a CHORI-211 BAC library
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                                                                                                                                                                                                                                                                                                                                                                                                               VRT 25-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (25-DEC-2003) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Dec 25, 2003 this sequence version replaced g1:38091208.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, estinopterygii, Neopeerygii, Teleostei; Ostariophysi, Cypriniformes; Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                               BX247878 190715 bp DNA linear VRT 25-DEC-20 Zebrafish DNA sequence from clone CH211-26605 in linkage group 7,
                                                                                                                                                                                                                Gaps
                                                                                                                                                               94.4%; Score 17; DB 14; Length 177551; 100.0%; Pred. No. 1.4e+02; ive 0; Mismatches 0; Indels 0;
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         /estimated_length=100
59512. .70527
/note="assembly_fragment"
70528. .70627
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Contact: zfish-help@sanger.ac.uk
                                                                                               /estimated length=100 70628. .80578
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Matches 17; Conservative
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BX247878
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Submitted (13-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Nov 13, 2002 this sequence version replaced gi:23101651.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.ed/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html). NOTE: This is a "working draft' sequence. It currently consists of 1 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                    Submitted (09-JAN-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
Wang, Q., Wang, S., Warren, J., Warren, R., Wei, X., White, F., Walliams, G., Williams, W., Waczyk, R., Wooden, H., Worley, K., Wright, D., Wright, R., Wu, J., Yakub, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Miderhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

203746: contig of 203746 bp in length.
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/organism="Rattus norvegicus"
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Rat Genome Sequencing Consortium.
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/db_xref="taxon:10116"
/clone="CH230-25001"
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/note="clone_boundary
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Direct Submission
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**NOTE: This sequence may represent more than one clone

**The sequence data in this record represents an "enhanced" version

**The sequence data in this record represents an "enhanced" version

**Sequence data in this record represents an "enhanced" version

**Sequence has been established using one or more of the

**Following: read-pair data from individual subclones, overlaps

**With neighboring clones, alignment with available reference

**Sequence (e.g., human), and/or confirmation by PCR testing.

**NOTE: This is a "working dataft' sequence. It currently

**consists of S contigs. Gaps between the contigs

**are represented as runs of N. The order of the pieces

**is believed to be correct as given, however the sizes

**of the gaps between them are based on estimates that have

**provided by the submittor.**

This sequence will be replaced

**by the finished sequence as soon as it is available and

**the accession number will be preserved.**

**Instance will be replaced

**of 1100 bp

**30144: contig of 12448 bp in length

**30149: 39429: agp of 1100 bp

**30149: 187713: gap of 1100 bp

**B9714: 187713: gap of 1300 bp

**B9714: 187713: gap of 2000 bp

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Submitted (01-NOV-2002) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 213533)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (15-SEP-2004) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Sep 9, 2004 this sequence version replaced gi:25188275.
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Center code: BCM
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1. .213533
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Barchontoglires; Glires; Rodentia; Sciuropathi; Muzoidea; Muridae; Murinae; Rattus.

Sciuropathi; Muzoidea; Muridae; Murinae; Rattus.

Sciuropathi; Muzoidea; Muridae; Murinae; Rattus.

Sciuropathi; Muzoidea; Murinae; Rattus.

I (bases 1 to 214061)

RN Muzoide, Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J., Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Banderanaike, D., Barber, M., Barastead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Baranstead, M., Benahmed, F., Cardenss, V., Carter, K., Cavacos, II., Ceasar, H., Center, A., Carter, K., Cavacos, I., Ceasar, H., Center, A., Chavez, D., Chen, G., Chon, R., Chen, Z., Chon, Z., Chon, Z., Chon, Z., Chon, Z., Chon, Z., Chen, Z., Chon, J., Davis, M.L., Davis, C., Coyle, M., Cree, A., Disouza, L., Davis, R., Davan, A., Becotto, M., Eugene, C., Evans, C.A., Davalls, F., Banner, C., Egan, A., Escotto, M., Eugene, C., Evans, C.A., Falls, T., Fan, G., Fraser, C.M., Gabiei, A., Garde, A., Garde, A., Garde, A., Garde, M., Garder, W., Gebregoorgis, E., Geer, K., Gill, R., Carde, A., Garder, M., Garder, W., Guraratne, P., Haaland, W., Henderson, N., Hernandez, J.,
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Rattus norvegicus clone CH230-179F6, WORKING DRAFT SEQUENCE, 2
unordered pieces.
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Pred. No. 1.4e+02;
0; Mismatches 0; Indels
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AC119364.5 GI:25009122
HTG, HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="assembly_name:Contig149"
                                                                                                                               28445. .30144
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Conservative 0;
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Best Local Similarity
Matches 17; Conserva
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Hermander R. Hings S. Hadna D. Hodgene, M. Nagone, M. Karpander R. Karpander R. Hings S. Hadna D. Hollings J. Onliver A. Karpander R. Handler S. Handler S. Handler S. Handler S. Handler S. Karpander S. Handler S. Karpander S.
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JOURNAL REFERENCE TITLE JOURNAL

AUTHORS

TITLE JOURNAL

COMMENT

REFERENCE AUTHORS

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250548 bp DNA linear HTG 09-OCT-2002
Rattus norvegicus clone CH230-29N17, *** SEQUENCING IN PROGRESS
***, 2 unordered pieces.
NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is
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Muzny, D.Marie., Metaker, M.Lee., Abramazon, S., Adams, C., Alder, J.,
Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D.,
Anyalebechi, V., Aoyagi, A., Ayddeji, M., Baca, E., Baden, H.,
Baldwin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F.,
Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M.,
Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E.,
Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A.,
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Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia,
Sciurognathi, Muroidea, Muridae, Murinae, Rattus.
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                                                                                                                 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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                                                                                                                                                                                                                                           1 229273: contig of 229273 bp in length 229274 229373: gap of unknown length 229374 234063: contig of 4690 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
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HTG: HTGS_PHASEL; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94.4%; Score 17; DB 14; L. 100.0%; Pred. No. 1.4e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                 /organism="Rattus norvegicus"
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                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             end_sequence:BH301784"
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AC128521/c
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Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Y., Chen, Z., Chu, J., Clavez, D., Clavez, D., Clavez, D., Davis, C., Cox, Cayle, M., Cree, A., D'Souza, L., Davis, G., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramo, C., Ding, Y., Dinh, H., Divya, K., Drapler, H., Dugama-Rocha, S., Dunn, A., Durbin, K., Duval, B., Eaves, K., Egan, A., Escotto, M., Eugene, C., Evans, C.A., Falls, T., Falls, T., Fander, M., Gebregorgis, E., Gaer, K., Galls, R., Garda, A., Garder, M., Garda, M., Garda, A., Garda, A., Garda, A., Garda, M., Harlas, S., Halvas, A., Handu, S., Hongous, M., Harlas, S., Halvas, S., Handun, S., Hongous, M., Jockson, A., Hagua, P., Mayla, P., Kally, S., Kelly, S., Kally, S., Martin, R., Marti
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S Rat Genome Sequencing Consortium.

Direct Submission

Submitted (09-00T-2002) Human Genome Sequencing Center, Department Submitted (09-00T-2002) Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Sep 14, 2002 this sequence version replaced gi:21909266.

The sequence in this sequence fadulyprojects/rat/). As a result, the sequence may extend beyond the ends of the clone and there may be contigs that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence only contigs will be indicated in the feature table.
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2 (bases 1 to 250548)
Worley, K. C.
Direct Submission
Submitted (19-JUL-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: Baylor College of Medicine
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COMMENT

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Metazoa; Martidae; Glires; Rodentia; Sciuropathi; Muroidea; Muridae; Murinae; Rattus.

Sciuropathi; Muroidea; Muridae; Murinae; Rattus.

1 (bases 1 to 25935)

1 (bases 1 to 25935)

Muzny, D.Marie., Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J., Albbrooks, S., Amin, A., Anguiano, D., Anyalebechi, V., Aoyagi, A., Ayodeji, M., Barnstead, M., Benahmed, F., Balachi, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Baryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E., Cardenas, V., Chavez, D., Chen, G., Coyle, M., Cener, A., Chacko, J., Chavez, D., Chen, G., Coyle, M., Cree, A., D'Souza, L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, Davis, C., Daveno, C., Ding, Y., Dinh, H., Divya, K., Draper, H., Dugan-Rocha, S., Dunn, A., Durbin, K., Duval, B., Baves, K., Egan, A., Escotto, M., Eugene, C., Vanns, C.A., Falls, T., Fan, G., Fernandez, S., Filley, M., Flaggy, N., Forbes, L., Foster, P., Fraser, C.M., Gabisi, A., Ganta, R., Garcia, A., Garner, T., Garza, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC095794 1:near HTG 13-NOV-2002 259335 bp DNA linear HTG 13-NOV-2002 Rattus norvegicus clone CH230-9F15, *** SEQUENCING IN PROGRESS ***,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                               NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html) NOTE: This sequence may represent more than one clone. NOTE: This is a 'working draft' sequence. It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
Assembly program: Phrap, version 0.990329
Consensus quality: 235756 bases at least Q40
Consensus quality: 237808 bases at least Q30
Consensus quality: 23971 bases at least Q20
Estimated insert size: 257025; sum-of-contigs estimation
Quality coverage: 3x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94.4%; Score 17; DB 14; Length 250548; 100.0%; Pred. No. 1.4e+02; rive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 249385: contig of 249385 bp in length 249386 249485: gap of unknown length 249486 250548: contig of 1063 bp in length. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC095794.5 GI:24940895
HTG: HTGS_PHASEL; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /estimated length=unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA'
/db_xref="taxon:10116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="CH230-29N17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="wgs_contig"
247780. .249385
/note="wgs_contig"
249386. .249485
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Best Local Similarity 100.0
....hes 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 unordered pieces.
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AC095794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
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KEYWORDS
SOURCE
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FEATURES
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Gebregeorgis, E., Geer, K., Gill, R., Grady, M., Guerra, W., Guevaraum, P., Haaland, W., Hamil, C., Hamilton, C., Hamilton, K., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Havlak, P., Hawes, A., Henderson, N., Hernandez, J., Harlandez, R., Hilden, S., Hulyk, S., Hume, J., Idlebird, D., Jackson, J., Jackson, L., Jacob, L., Jang, H., Johnson, B., Johnson, R., Jolivet, A., Karpethy, S., Kally, S., Khan, Z., King, L., Kovar, C., Liu, J., Liu, M., Mahlindarthe, M., Levan, J., Lewis, L., Liu, J., Loulseged, H., Lozado, R. J., Lu, X., Mangum, A., Mangum, B., Mayua, P., Martin, K., Martin, R., Mantinox, J., Mangum, A., Mangum, B., Mayua, P., Martin, K., Martin, R., Martin, R., Mangum, A., Mangum, P., Martin, K., Martin, R., Mangum, A., Mangum, P., Martin, K., Martin, R., Mangum, A., Mangum, P., Martin, K., Martin, R., Martin, R., Mangum, A., Mangum, A., Mangum, P., Martin, K., Martin, R., Martin, R., Martin, R., Mangum, A., Martin, R., Mangum, A., Mangum, P., Martin, R., Martin, R., Mangum, A., Martin, R., Nangum, A., Mangum, A., Mangum, P., Martin, R., Martin, R., Mangum, A., Martin, R., Popper, S., Poindexter, A., Popovic, D., Primus, E., Pu, L.-L., Planck, S., Parks, K., Reilly, B., Railly, B., Railly, M., Railly, B., Railly, M., Savery, G., Scherer, S., Scotl, G., Shatsman, S., Shen, H., Sheaf, S., Shen, S., Steinle, M., Strong, R., Strong, R., Streson, I., Sitter, C.D., Smajs, D., Taylor, C., Taylor, T., Thomas, M., Marke, M., Warten, R., Walke, M., Warten, R., Walker, M., Wang, C., Wang, S., Dang, S., Dang, M., Walker, M., Wal
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Direct Submission

La Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

Rat Genome Sequencing Consortium.

Direct Submission

La Submitted (13-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Nov 13, 2002 this sequence version replaced gi:22773035.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig excificled in the Atlas assembly (a 'contig-scaffold'). Within each contige scaffold, may extend beyond the each of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome contigs within a contig-scaffold that consist entirely of whole shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome contigs within a contig-scaffold that consist entirely of whole sequence and in the sequence contigs within sequence reads. Both end sequences and whole genome contigs within sequence reads. Both end sequences and sequences and whole genome contigs with the sequence and sequences and whole genome contigs within sequence and sequences and whole genome contigs within sequence and sequences and whole genome contigs within sequence and sequences and sequence and 
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Center code: BCM
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AUTHORS TITLE JOURNAL

TITLE JOURNAL

REFERENCE

AUTHORS TITLE JOURNAL

COMMENT

REFERENCE

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NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence It currently consists of 5 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DQ097951 2005 bp DNA linear PRI 23-JUL-2005 Homo sapiens nonfunctional T cell receptor alpha variable 8-5 (TRAV8-5) gene, complete sequence.
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
Consensus quality: 240241 bases at least Q20
Estimated insert size: 241666; sum-of-contigs estimation
Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94.4%; Score 17; DB 14; Length 259335; 100.0%; Pred. No. 1.4e+02; cive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                 245368: contig of 245368 bp in length 245468: gap of unknown length 254303: contig of 8835 bp in length 254403: gap of unknown length 256377: contig of 1974 bp in length 256477: gap of unknown length 255711: contig of 1134 bp in length 257711: gap of unknown length 257711: gap of unknown length 259335: contig of 1624 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /estimated_length=unknown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="wgs_contig"
254304. .254403
/estimated_length=unknown
256378. .256477
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'estimated_length=unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="wgs_end_extension
clone_end:Sp6"
6828. ..7544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="genomic DNA'
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               end_sequence:BH340872"
135172. .136506
/note="wgs_contig"
245369. .245468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6828. 7544 /note="clone boundary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1. .259335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="CH230-9F15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93238 CACACCTATTCATACTC 93254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DQ097951
DQ097951.1 GI:70913413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100.
Les 17, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .1341
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254304
254404
256378
256478
257612
257712
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ORGANISM
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DQ097951
LOCUS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
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.23544,
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join(20001. .20245,22112. .2232,22824. .23005,23408. .23544,
23776. .23910,24044. .24131,24655. .24802,29574. .29693,
30050. .30172,30307. .30440,35046. .35230,40779. .40983,
41113. .41203,41936. .42130,42708. .42842,43588. .43689,
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GKPIKLLAAVFEVDI PKIDVYHYEVDI KPDKCPRRVNES WEWEWYNGYNGTFKOTFGDRKP
YDGKKOI YTVTALP IGNES VDFEVIT IP GEGKDRI FKVSIKWLAI VSWRMLHEALVSG
QIPVPLES VQALDVARRHLASMRYTPVGRS FFSPPECYTHPLGGGREW FGFHQSVRP
AMWKAMLNI DVSATAFYKAQPVI EFMCEVLDIRNI DEQPKPLT DSGRVRFTKEI KGLK
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33776. .23910,24044. .24131,24655. .24802,29574. .29693,
30050. .30172,30307. .30440,35046. .35230,40779. .40983,
41113. .41203,41936. .42130,42708. .42842,43588. .43689,
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Adams,M. and Mural,R.
Direct Submission
Submitted (24-JUL-2002) Celera Genomics, 45 West Gude Drive,
Rockville, MD 20850, USA
Location/Qualifiers
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                                                                                                                                                                               Length 2005;
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                                                                                                                                                                               Score 16.4; DB 8;
Pred. No. 4.2e+02;
0; Mismatches 1;
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/protein_id="AAN75579.1"
/db_xref="G1:26449033"
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/mol_type="genomic DNA"
/db_xref="taxon:10090"
117<u>1</u>0. .11763
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/replace="t"
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                                               gene="TRAV8-5"
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/note="mAgol"
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                         Mackelprang, R., Livingston, R.J., da Ponte, S.H., Rieder, M.J., Yi, Q., Subrahmanyan, L., Montoya, M. and Nickerson, D.A.
Direct Submission
                                                                                                    Submitted (17-JUN-2005) Genome Sciences, University of Washington, 1705 NE Pacific, Seattle, WA 98195, USA This work was supported by the National Institutes of Health (A145279) and a Program for Genomic Applications (HL66682 and HL66642) (URL: http://chum.gs.washington.edu).
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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/frequency="0.47"
/replace="9"
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/replace="t"
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/replace="a"
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/replace="a"
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/frequency="0.16"
/replace="t"
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/frequency="0.01"
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/replace="g"
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/frequency="0.46"
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/frequency="0.48"
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339. .1559
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/gene="TRAV8-5"
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AC151470.

AC151470.

HTG; HTGS_PHASE2; HTGS_DRAFT.

Xenopus tropicalis (SiTurana tropicalis)

Xenopus tropicalis (SiTurana tropicalis)

Eukaryota; Metazaa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Amura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopodis; Silurana.

Xenopodinae; Xenopus; Silurana.

I (bases 1 to 68792)

S Tindall, A.J., Pownall, M.E., Morris, I.D. and Isaacs, H.V.

The Xenopus tropicalis peroxidasin gene is expressed within the developing neural tube and pronephric kidney

Dev. Dyn. (2004) In press

E (bases 1 to 68792)

S DE Joint Genome Institute.

S DoE Joint Genome Institute.

Submitted (02-SEP-2004) Production Genomics Facility, DOE Joint Genome Institute, 2800 Mitchell Drive B100, Walnut Creek, CA
           ACIS1470 68792 bp DNA linear HTG 02-SEP-2004
Xenopus tropicalis, WORKING DRAFT SEQUENCE, 5 ordered pieces.
ACIS1470
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This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

1 5364: contig of 5364 bp in length 5365: contig of 808 bp in length 6272: contig of 808 bp in length 6372: gap of unknown length 6373: gap of unknown length 6373: gap of unknown length 6526 66325: contig of 5983 bp in length 65110: contig of 785 bp in length 67110: gap of unknown length 67111; gap of unknown lengt
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/mol_type="genomic DNA"
/db_xref="taxon:8364"
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/estimated_length=226
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Submitted (21-58P-2001) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA On Sep 21, 2001 this sequence version replaced git4079612.

Sep 21, 2001 this sequence oriented from centromere to q telomere. BC264576 overlaps BC282485 (CTC-344H19, AC007785) to the left from bases 1 to 20,286 of this accession, and overlaps BC2821 (CTB-139A18, AC007193) to the right from bases 106,317 to 107,573 of this accession. This sequence does not represent the entire insert of BC264576. Additional chromosome 19 map and sequence information may be obtained at: http://www.bio.llnl.gov/bbrp/genome/genome.html.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC006262 107573 bp DNA linear PRI 21-SEP-2001
Homo sapiens chromosome 19, BAC BC264576 (CTC-297N14), complete
sequence.
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1 (bases 1 to 106320)

Lamerdin,J.E., McCready,P.M., Skowronski,E., Viswanathan,V.,
Lamerdin,J.E., McCready,P.M., Dias,J., Ramirez,M., Stilwagen,S.,
Phan,H., Velasco,N., Do,L., Regala,W., Terry,A., Garnes,J.,
Danganan,L., Erler,A., Christensen,M., Georgescu,A., Avila,J.,
Liu,S., Attix,C., Andreise,T., Trankheim,M., Amico-Keller,G.,
Coefield,J., Duarte,S., Lucas,S., Bruce,R., Thomas,P., Quan,G.,
Kronmiller,B., Arablano,A., Sanders,C., Ow,D., Nolan,M., Trong,S.,
Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
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Submitted (30-DEC-1998) Joint Genome Institute, Lawrence Livermore
National Laboratory, 7000 East Ave., Livermore, CA 94551, USA
Lamerdin,J.E.
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CA 94551, USA
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                           Length 68792;
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National Laboratory, 7000 East Ave., Livermore,
3 (bases 1 to 106320)
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AC006262.2 GI:15718550
HTG.
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2 (bases 1 to 107573)
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                                                                                                                                                                                                                                                                                     17; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11945. 11998
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complement (7611. .7916)
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/rpt_family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family="AluJb"
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GSAELVCLVVGGAQHWAAVBAAGARLSPAYPAAGVRASFRSARKGFLLLQEVTVAVQ
COMplement (1097. .2897). .2897)
/note="similar to Vaccinia virus strain Copenhagen MIL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /procein_id="AAR99363.1"
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IMTTSAYNDGGTSGGISSGMREMSFLQHNKCECRPKSTPPPFETTEESHRR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not experimental
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WGSWWGGPPAKKHCGGGGGGIFAGMYGGSGGSGGICGGVKGGVSGGINGGISKI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="AAR99354.1"
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                                                                                                                                                                                                                                                                                                                                                                                                                       ARADTVRLLIRHGADLINSMDVYSMTPMAVLLRSSDATLELVRLLADAGSDMRTTDFRC
TALLHGHARSYRPRAIFEELISRGCOPLATIVRGNPPLHSMATISSCKNTLLOGPFVR
AGLDIDALNYRGASPLHFATIGHRIDAAAAKLIVAAGARIDLRSRNGITPLDNIVAHNI
GRAMRAVIKRSPPAHEVADALARBEVTTRQCVAYVVAHLGAAALADPDKHAHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DFIRICLADTAVLRTVTFGDPLCSALDLLRRRMDNLPADPPPRAILRLIARLVVYGPD LERRVVEMRAAALRRL. CORDLement (2666. .4215) complement (2666. .4215) /note="similar to Vaccinia virus strain Copenhagen M1L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /trānslation="MDHPVMEDAVMEDGVEAALYNYFCLCPRVSARAVRTLLKMGADV
NYTGPLDKTPEHAYLHTGGPKOVRIVALKAGAYDVPTGRECGSTPHHYLRLAVVD
NYTGPLGVTFPHAYLHTGGPKOVRIVANSLLREVVLNNEDFSACSWEYMEFLVRAGANVNDG
IGFTRTLLHACMGVRTNVFMVNSILKLGADVRARDVYGATPLGALLKSPSACVELVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LVAAGSDVCTVDARHNNLLHQHAQSRRPSAAVIRRLIELGCDPTALNSSGNTPLHLMA
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GAHALPEPVRGSQAAFVAECEAETALMRAVRVGTPATPLLDVVCSRTPPATLVRRRSA
KSLKILSIYRDVLQQRLVHMRHRSALVDSLVMRIGPCPLPADVVALVLLRVPTPQLRT
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note="similar to Vaccinia virus strain Copenhagen F2L"
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'note="similar to Vaccinia virus strain Copenhagen B4R"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="ORFA04 ankyrin repeat protein"
/protein id="AAR98361.1"
/db_xref="GI:41018756"
                                                                                                                                                                                                                                                                                  'product="ORF003 ankyrin repeat protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           product="ORF008 ankyrin repeat protein"
|protein_id="AAR98365.1"
|db_xref="GI:41018760"
                                         /evidence=not_experimental/product="ORF001 hypotheti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       product="ORF007 dUTPase"
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/codon_start=1
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Parapoxvirus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 134431)
Delhon,G., Tulman,E.R., Afonso,C.L., Lu,Z., de la
Concha-Bermejillo,A., Lehmkuhl,H.D., Piccone,M.E., Kutish,G.F. and
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(db xref="taxon:129727" / country="USA: Arkansas" / country="USA: Arkansas"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AYJ86265 134431 bp DNA linear VRL 20-JAN-20
Bovine papular stomatitis virus strain BV-AR02, complete genome.
AY386265
                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 16.4; DB 15; Length 110000; Pred. No. 3.1e+02;
                   Length 107573;
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                                                                    Indels
                 Score 16.4; DB 8;
Pred. No. 3.2e+02;
                                                               0; Mismatches
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/strain="BV-AR02"
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Bovine papular stomatitis virus
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                 Query Match
Best Local Similarity 94.4%;
Matches 17; Conservative
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Best Local Similarity 94.4
Matches 17; Conservative
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Direct Submission
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AE017349 00
AE017349 00
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Continuation 79
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AE017349 08/c
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JOURNAL
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SOURCE
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LOCUS
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Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Chiroptera; Microchiroptera; Mammalia; Eutheria; Laurasiatheria; Chiroptera; Microchiroptera; Minolophidae; Rhinolophidae; Rhinolophidae; Rhinolophidae; Rhinolophidae; Rhinolophidae; Bullaces 1 to 1136685)

Antonellis, A., Ayele, K., Benjamin, B., Blakesley, R.W., Boakye, A., Bouffard, G.G., Brinkley, C., Brooks, S., Coleman, H., Engle, J., Pitksenko, T., Gestole, M., Garene, A., Guan, X., Gupta, J., Harle, B., Idol, J. R., Koong, P., Laric, P., Larson, S., Lee-Lin, S.-Q., Legaspi, R., Madden, M., Madurco, O.L., Madurco, V.B., Margulies, B.H., Masiello, C., Maskeri, B., McDowell, J., Mojidi, H.A., Mullikin, J.C., Oestracher, J.S., Park, M., Portnoy, M.E., Prasad, A., Puri, O., Stantipop, S., Stephen, E., Taye, A., Thomas, J.W., Thomas, P.J., Tsipouri, V., Ung, L., Vogt, J.L., Wetherby, K.D., Young, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC160234 138685 bp DNA linear HTG 06-MAY-2005
Rhinolophus ferrumequinum clone VMRC7-248B22, WORKING DRAFT
SEQUENCE, 4 ordered pieces.
                                                                                                                                                                                                                                               /protein id="AAR98371.1"
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/note="similar to Molluscum contagiosum virus MC027L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /trānslation="WDEELILLLGFAMDSEMPLSHMNKLRRRLTKLRMNSFAVIMCLR
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Submitted (06-MAY-2005) NIH Intramural Sequencing Center, 5625

Fishers Lane, Rockville, MD 20852, USA
On May 6, 2005 this sequence version replaced gi:62751232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submittad (20-APR-2005) NIH Intramural Sequencing Center, 5625
Fishers Lane, Rockville, MD 20852, USA
3 (bases 1 to 138685)
                                                                                               complement(13212. .13493)
/note="gimilar to Molluscum contagiosum virus MC026L"
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                                                                                                                                                                     /codon_start=1
product="ORF014 modified RING finger protein"
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HTG; HTGS PHASEZ; HTGS DRAFT.
Rhinolophus ferrumequinum (greater horseshoe bat)
Rhinolophus ferrumequinum
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Center code: NISC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91.1%; Score 16.4; DB 13; 94.4%; Pred. No. 3.1e+02; ive 0; Mismatches 1;
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Best Local Similarity 94.4
Matches 17; Conservative
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AC160234/c
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RLGTPVRKGTLLDIMVCYGVYAIMVCDPASYTRPDTEVLAHDARTAAQASSWAQPH

LHSPSTGCYAAWFCYRCGGOGRVQLHSIVMVTGWYFRGPSARMVYRELLWMLATCKEH

MTVYGFYSSFPDSRQVFALAGKGWTRLSENTLLSKLGNRVTFVDLARRAAGTLESEYC

EFWGGACVEVPEDIUPDDENPAVAEDAASVAAQALMDAARSHQAALARIFSESTC

RGKRYPAGKPFYTELTRGLLSIALCEVERSPEVRIPYLPDDDBDGLRFSVULTSVD

IETAARKGYSIRY AALEWGRSEEVLRTGIRAQMAATRELNIPQTSNLMSRIASMPL

PLDPDSSSPGGRSSAVVRAFAASYCRSTIHSLIERVDSHFSGNFVVRHGYDRFWVRDRV

AKHLTGVSGIGEVLPAVAR"
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                                           ETMILAGAEVRTEGGEVFYDNVLSSFIASCGSTGSEAJIVRULIRAGADVRESDAYDM
TALHYYARNPAARPDVLGLMIEAGADVRAMDKHGVTELAVLLSSTGYNDELVAMMLRA
GADPRARDDNGSTLLHHLATVPRAKESIMRTLVDSGCDPAGIDTGGNTALHYNAMYGT
CRREVVSFILEKGLDHADAOGGGTALYRAAVFNPAKTRILGMGADLAPVAATGFCA
VAEVFRRNDFKSAAALLERKPPIDLLVRALVTATNWGFFFPDSEAALLCVHSLVARGA
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NFLEDINYKNECCLLSQEEMDELLVEIEDMMKLLSDGMKQS"
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YYKVKVSGRDDVGNLLGSFWISNAGQWYVGSASLTGGSISNIKNLGVYSTNRHLATDL
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BEDLYLHRIDSAKNSIDLSLESLYVPIRHADRYKYNPRIMDALLAALIDRSVRYRVIY
TEWKNADFLGSVSAARTLINDFGVGSIDISTRLSIPGRDAANNTKLLIVDDTFAHVTV
ANMDGTHYKYHAFVSVNAEKGDIVNQLSAVFERDWRSQYCKPIN"
                                                                                                                                                                                                                                                        GERVRAEPVLGKYADAVRECEAEIRAMREVRCNADTTLLDVLRADESAKAVHVPNALL
DRVHAFKVYGNALFGKVCMMRLRMSLABHVAGLLCPCALPPEIVTSILSYMSYBELMG
                     EYGRTPLHLCVLVARNANCADIVETLLEAGADVNARDVCGYTPLHCYVQHDYVQLRVV
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/note="similar to Vaccinia virus strain Copenhagen F12L
and Molluscum contagiosum virus MC019L"
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/note="similar to Vaccinia virus strain Copenhagen F13L
and Molluscum contagiosum virus MC021L"
                                                                                                                                                                                                                                                                                                                                                                                                                                  /noce="similar to Vaccinia virus strain Copenhagen F11L and Molluscum contagiosum virus MC018L"
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                                                                                    * NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

* This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

* 1 27052: contig of 27052 bp in length 27053: contig of 78727 bp in length 27153: 105879: contig of 78727 bp in length 105880 105979: gap of unknown length 105980 130171: contig of 24192 bp in length 130172: langes contig of 4414 bp in length 130172 130272: gap of unknown length 130272 138685: contig of 8414 bp in length.
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83540. .138685
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AC160240 clone VMRC7-88J4 (center project name ipj)"
1058800. .105979
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/clone="WNR7-78B22"
/clone lib="WNR7"
/note="BAC resource: http://bacpac.chori.org/"
site: http://www.nisc.nih.gov
              Contact: nisc_zoo@nhgri.nih.gov
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27053.__27152
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27153.__105879
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130272. 138685
/note="assembly_fragment
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                                                              Center clone name: 248B22
                                              Center project name:
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HTG 06-MAY-2005
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Laurasiatheria; Insectivora; Erinaceidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC159925
Atelerix albiventris clone LB4-257D11, WORKING DRAFT SEQUENCE, 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequence data in this record represents an 'enhanced' version of a Phase 2 submission. Specifically, the indicated order and orientation of each sequence contigl has been established using one or more of the following: read-pair data from individual subclones, overlaps with neighboring clones, alignment with available reference sequence (e.g., human), and/or confirmation by PCR testing. In addition, the sequence assembly is generally based on at least 8X average coverage in Q20 bases and has been reviewed to rule out gross misassemblies, the low-quality ends of sequence contigs have been trimmed away, and each base is associated with a Phrap-derived quality score.
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Fishers Lane, Rockville, MD 20852, USA
                                                                                                                                                                                            Gaps
                                                                                                                            Length 138685;
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC159925.2 GI:63055118
HTG; HTGS PHASEZ; HTGS DRAFT.
Actlerix albiventris (middle-African hedgehog)
Atelerix albiventris
                                                                                                                            91.1%; Score 16.4; DB 14; 94.4%; Pred. No. 3.1e+02; ive 0; Mismatches 1;
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Contact: nisc_zoo@nhgri.nih.gov
------ Project Information
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Center clone name: 257D11
                                 vector_side:right"
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                                                                                                                                                                                                                                                            1 CCACACCTATTCATACTC 18
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1 (bases 1 to 149184)
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clone_end:SP6
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                                                                                          Query Match
Best Local Similarity 94...
Best Local 17; Conservative
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Query Match
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JOURNAL
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JOURNAL
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AUTHORS
                                                                                                                                    Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
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KEYWORDS
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                                         ORIGIN
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                    * NOTE: This is a 'working draft' sequence. It currently consists of 7 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

* This sequence will be replaced

* by the finished sequence as soon as it is available and the accession number will be preserved.

* 1 54387; contig of $4387 bp in length

* 54388 $4487; gap of unknown length

* $573 $2672; contig of $13158 bp in length

* $6572; contig of $13158 bp in length

* $6573 $9580; contig of $13158 bp in length

* $101314 $101413; gap of unknown length

* $101314 $12846; contig of $2673 bp in length

* $12847 $12826; gap of unknown length

* $12817 $12826; gap of unknown length

* $13201 $13200; contig of $374 bp in length

* $13201 $13200; contig of $374 bp in length

* $13201 $13200; gap of unknown length
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vector_side=left"
26261...149184
/note="clone overlaps with GenBank Accession Number
Ac160584 clone LB4-23009 (center project name kdx)"
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95831. 95930
/estimated_length=unknown
95931. 101313
/note="assembly_fragment"
101314. 101413
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/estimated length=unknown
54488. .82572
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/note="assembly_fragment
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----- Summary Statistics
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Enjanceine; Arelerix.

I (bases 1 to 15057)

S Antonellis, A. Ayelek, Benjamin, B., Blakesley, R.W., Boakye, A.,

Bouffard, G.G., Brinkley, C., Brooks, S., Chu, G., Coleman, H.,

Bouffard, G.G., Brinkley, C., Brooks, S., Chu, G., Coleman, H.,

Buffard, J., Fuksenko, T., Gestole, M., Greene, A., Guan, X., Gupta, J.,

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Masiello, C., Maskeri, B., McDowell, J., Mojidi, H.A., Mullikin, J.C.,

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Stantripop, S., Stephen, E., Taye, A., Thomas, P.J.,

Tsipouri, V., Ung, L., Vogt, J.L., Wetherby, K.D., Young, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC160584 150567 bp DNA linear HTG 05-MAY-2005
Atelerix albiventris clone LB4-23009, WORKING DRAFT SEQUENCE, 2
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Mammalia, Eutheria, Laurasiatheria, Insectivora, Erinaceidae,
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Direct, Submission
Submitted (05-MAY-2005) NIH Intramural Sequencing Center, 5625
Submitted (05-MAY-2005) NIH Intramural Sequencing Center, 5625
Fishers Lane, Rockville, MD 20852, USA
On May 5, 2005 this sequence version replaced gi:62945479.
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                                                                                                                                                                                                                          Gaps
                                                                                                                                         Length 149184;
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Atelerix albiventris (middle-African hedgehog)
Atelerix albiventris
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Center code: NISC
Web Site: http://www.nisc.nih.gov
Contact: nisc zoo@nhgri.nih.gov
                                                                                                                                         91.1%; Score 16.4; DB 14;
ilarity 94.4%; Pred. No. 3.1e+02;
Conservative 0; Mismatches 1;
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2 (bases 1 to 150567)
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                                                                                                                                                                            Local Similarity
les 17; Conserva
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Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
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AC105201
                                                                                                                                                                                                                                                     * NOTE: This is a 'working draft' sequence. It currently
* consists of 2 contigs. Gaps between the contigs
* are represented as runs of N. The order of the pieces
* is believed to be correct as given, however the sizes
* of the gaps between them are based on estimates that have
* provided by the submittor.
* This sequence will be replaced
* by the finished sequence as soon as it is available and
* the accession number will be preserved.
* 1 27872: contig of 27872 bp in length
* 27873 150567: contig of 122595 bp in length.
* 1 1 27872: contig of 122595 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps

    1. 122925
    /note="clone overlaps with GenBank Accession Number ACI59925 clone LB4-257D11 (center project name kdw)"

             Sequencing vector: plasmid; n/a; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.990319
Consensus quality: 14914 bases at least Q40
Consensus quality: 150134 bases at least Q20
Consensus quality: 150136 bases at least Q20
Insert size: 148000, agarose-fp
Insert size: 150467; sum-of-contigs
Quality coverage: 8.80x in Q20 bases; sum-of-contigs
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1 (bases 1 to 151032)
Birren,B., Linton,L., Nusbaum,C. and Lander,E.
Homo sapiens chromosome 18, clone RP11-244M2
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27973. .150567
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AC105201/c
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Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Cangopiano, A., Chang, J., Chazaro, B., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Paro, S., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Gord, S., Govette, M., Grand, L., Grand-Pierre, N., Hagos, B., Haaford, A., Horton, L., Hulme, W., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaNocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Liu, G., Macdonald, P., Marjor, J., Marquis, N., Matchews, C., Macdonald, P., McKernan, K., McPheeters, R., Meldrim, J., McRwan, P., McKernan, K., McPheeters, R., Meldrim, J., Norbu, C., Norman, C., Norman, C., Petta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Stauer, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Viel, R., Vo, A., Wilson, B., Wu, X., Waman, D., Ye, W.J., Young, G., Direct Bubmister, A. and Zody, M.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (02-MAR-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Feb 13, 2002 this sequence version replaced gi:18483543.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
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Center: Whitehead Institute/ MIT Center for Genome Research
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AC016373 152106 bp DNA linear HTG 30-MAR-2000 Homo sapiens clone RP11-13M18, WORKING DRAFT SEQUENCE, 13 unordered pieces. Direch, B. Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M., Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Boukhgalter, B., Brown, A., Castle, A., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M., Ferreira, P., Fizzlugh, W., Forrest, C., Fuuke, R., Gage, D., Galagan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L., Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Gaps Score 16.4; DB 8; Length 151032; Pred. No. 3.1e+02; 0; Mismatches 1; Indels 0; Hominidae, Homo.

Hominidae, Homo.

I (bases 1 to 152106)

Birren, B., Linton, L., Nusbaum, C. and Lander, E.

Homo sapiens chromosome, clone RP11-13M18

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Best Local Similarity 94.4
Matches 17; Conservative Homo sapiens repeat_region DEFINITION ORGANISM RESULT 44 AC016373 LOCUS REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS ACCESSION VERSION KEYWORDS SOURCE d ò

TITLE JOURNAL

COMMENT

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Zebrafish DNA sequence from clone CH211-253D2 in linkage group 23, CR118635
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31996. .402
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                                        misc_feature
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Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Lehoczky, J., Lieu, C., Locke, K., Macdonald, P., Marquis, N., McBwan, P., McGurk, A., McKernan, K., McLaghlin, J., Melorim, J., Morrow, J., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Tirrell, A., Vassiliev, H., Vo, A., Wheeler, J., Wu, X., Wyman, D., Ye, W.J., Zimmer, A. and Zody, M.
                                                                                                                                                     Submitted (25-NOV-1999) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 30, 2000 this sequence version replaced gi:6624031.
All repeats were identified using RepeatMasker:
                                                                                                                                                                                                                                                            ------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOTE: This is a 'working draft' sequence. It currently consists of 13 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                          Insert size: 150906; sum-of-contigs
Quality coverage: 4.1 in Q20 bases; sum-of-contigs
Quality coverage: 4.9 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                          Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
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f 100 bp
g of 13374 bp in length
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Web site: http://www-seq.wi.mit.edu
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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Gaps

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FEATURES

ORGANISM

KEYWORDS

/ERSION

AUTHORS TITLE JOURNAL

COMMENT

REFERENCE

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Cambridgeshire, CBIO 15A, UK. E-mail enquiries: Vega@sanger.ac.uk
Clone requests: clonerequest@sanger.ac.uk
On Feb 5, 2001 this sequence version replaced gi:12584390.
The following abbreviations are used to associate primary accession
numbers given in the feature table with their source databases:
Em:, EMBL; Sw:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information
on the WORMPEP database can be found at
http://www.sanger.ac.uk/Projects/C elegans/wormpep This sequence
was generated from part of bacterial clone contigs of human
chromosome 13, constructed by the Sanger Centre Chromosome 13
Mapping Group. Further information can be found at
http://www.sanger.ac.uk/HGP/Chr11.2 constructed by the group
of Pieter de Jong. For further details see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.
                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Euteriontoglires, Primates, Catarrhini, Hominidae, Homo.

(bases 1 to 156077)
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complement (A1554651. 17:28148. 28173),
complement (A155465.17:28148. 28173),
complement (A155465.17:25849. 25909),
complement (A155465.17:2241. 22941))
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join(complement (32931. 33002),
complement (A155465.17:28148. 28173),
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/note="match: ESTP: BG181515 BG183515.1 BG189865
BG189665.1 BG191871 BG191871.1"
/locus tag="match: ESTP: A45212)
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/locus_tag="RP11-309H8.2-001"
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1. 156077
Acganism="Hono sapiens"
/mol rype="genomic DNA"
/db_xref="taxon:9606"
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Contact: vega@sanger.ac.uk
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complete sequence.
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This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Ems., EMBL; Sw., SWISSROT; Tr., TREMBL; Wp., WORNPEP; Information on the WORMPEP database can be found at http://www.sanger.ac.uk/Projects/C elegans/wormpep Clone-derived Length of monoucleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those beginning 'drr' were identified by Rick Waterman (Stephen Johnson lab, WashU). For further information see http://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml CH211-253D2 is from a CHORI-211 BAC library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL354997 18-MAY-2005 Human DNA sequence from clone RP11-309H8 on chromosome 13 Contains two novel genes and a novel RING finger protein pseudogene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                           Submitted (12-MAY-2005) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On May 7, 2005 this sequence version replaced gi:62954551.
                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Danio.
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Center code: SC
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Contact: zfish-help@sanger.ac.uk
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/clone="CH211-253D2"
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CR318635.8 GI:63094294
                                                              Danio rerio (zebrafish)
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Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CNSO5TEG 160718 bp DNA linear PRI 01-JUN-2001 Human chromosome 14 DNA sequence BAC R-55G7 of library RPCI-11 from chromosome 14 of Homo sapiens (Human), complete sequence.
                             /codon start=1
5854._.58797
/note=*Sequence from AC016373, sequenced by Whitehead.
Assembly confirmed by restriction digest data."
join(69315...69474,75779...76352)
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97179...97234
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134896...134919
/note="sequence from AC027145, sequenced by Whitehead. Assembly confirmed by restriction digest data."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (31-MAY-2001) Genoscope - Centre National de Sequencage :
Submitted (31-MAY-2001) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)
On Jun 8, 2001 this sequence version replaced gi:12580647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae, Homo.

1 (bases 1 to 160718)

Heilig, R., Petit, J.L.,

Brottier, P., Cattolico, L., Barbe, V., Pelletier, E., Artiguenave, P.,

Brottier, P., Cattolico, L., Barbe, V., Pelletier, E., Artiguenave, F.,

Gyapay, G., Saurin, W. and Weissenbach, J.

Sequencing of the human chromosome 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The following BAC sequence is oriented from the T7 to the SP6 end. Upstream BAC (overlapping the T7 end) : R-98N22 (AC=AL163152) Downstream BAC (overlapping the SP6 end) : C-2335L22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                   /note="Sequence from AC027145, sequenced by Whitehead. Assembly confirmed by restriction digest data."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 156077;
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0
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Quality coverage: 7.46x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Clone_left_end: RP11-114G1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 16.4; DB 8;
Pred. No. 3.1e+02;
/note="match: proteins: Q8VI40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www.genoscope.cns.fr/
Contact: SeqRef@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39509 CCACACCTATTCATACAC 39526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL359218.4 GI:14329664
HTG; HTGS_ACTIVEFIN.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91.1%;
94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
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                                                        misc_feature
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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SOURCE
ORGANISM
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DEFINITION
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CNS05TEG/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                        mRNA
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JOURNAL
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Eukaryota; Metazous Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Murinae; Rattus.

Sciurognathi; Muroidea; Murinae; Rattus.

1 (bases 1 to 163443)

Anian, C., Allen, H., Alabrooks, S., Amin, A., Angulano, D., Alder, J., Angulano, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Baldwin, D., Bandaranaike, D., Burrell, K., Calderon, E., Cardenas, V., Carter, K., Cavacos, I., Ceasar, H., Center, A., Chacko, J., Chen, G., Coyle, M., Cree, A., D'Souza, L., Davial, M. C., Davy-Carroll, E., De Anda, C., Dederich, D., Deavian, C., Davy-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramo, C., Coyle, M., Cree, A., D'Souza, L., Delgado, O., Denson, S., Deramo, C., Coyle, M., Cree, A., Divya, K., Denger, H., Dugan-Rochas, Dunn, H., Divya, K., Denger, H., Dugan-Rochas, S., Dunn, A., Durbin, K., Duval, B., Eaves, K., Egan, A., Escotto, M., Escotto, M., Edgene, C., Boans, C.A., Garde, A., Garder, M., Guerra, W., Guerra, W., Gunaratne, P., Haaland, W., Hamil, C., Hamilton, C., Hamilton, K., Harnandez, S., Hadun, S.L., Henderson, N., Hernandez, J., Hawes, A., Handen, S., Hadun, S.L., Hodgson, A., Hogues, M., Hollins, B., Howells, S., Hulyk, S., Hume, J., Idlebird, D., Jackson, A., Jackson, L., Jacob, L., Jacob, L., Jacob, L., Jacob, L., Jacob, L., Lebow, H., Levan, J., Lewis, L., Li, Z., Liu, J., Liu, W., Liu, Y., London, P., Longacre, S., Lou, J., Liu, J., Liu, W., Liu, Y., London, P., Longacre, S., Lu, J., Liu, J., Liu, Y., London, P., Longacre, S., Lu, J., Liu, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 91.1%; Score 16.4; DB 8; Length 160718; Best Local Similarity 94.4%; Pred. No. 3.1e+02; Matches 17; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percentage of bases with a quality value >= 40 : 99 $.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DNA"
/db_xref="taxon:9606"
/chromosome="14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="R-55G7"
/clone_lib="RPCI-11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         132546 CCACACCTATTCACACTC 132529
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Overall quality chart :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .160718
                                                                                                                                                                                                                                                                                                         3761
6619
18798
                                         bases
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84950
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us-10-608-296-38.rge

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PRI 11-JUN-1999
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
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Homo sapiens chromosome 19, BAC 282485 (CIT-B-344H19), complete
seguence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
    g of 25280 bp in length
f unknown length
g of 10895 bp in length
f unknown length
g of 12268 bp in length
i unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                            94136 bp in length
                                                                                                                                                                  unknown length
of 1325 bp in length
unknown length
of 1197 bp in length
                                                                                                                                                                                                                                                                                                                                                unknown length
of 2324 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7 159886: gap of unknown length
7 163443: contig of 3557 bp in length
Location/Qualifiers
                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                                                                                                                                                                           in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                   156007: contig of 3508 bp in 1
156107: gap of unknown length
159786: contig of 3679 bp in 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91.1%; Score 16.4; DB 14;
94.4%; Pred. No. 3.1e+02;
tive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Rattus norvegicus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /estimated_length=unknown 36276. .36375
/estimated_length=unknown 48644. .48743
/estimated_length=unknown
                                                                                                                                                                                                                                                                                                                                                                                           gap of unknown
contig of 3508
                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                contig of 1234
                                                                                                                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                                                                                                                             2940
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estimated length=unknown
(44305. .144404
estimated length=unknown
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/estimated length=unknown
152400. .152499
/estimated length=unknown
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gap of unka
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HTG.
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Best Local Similarity 94.47
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156108
159787
159887
                                                  25381
36276
36376
48644
48744
142880
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144405
145602
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KEYWORDS
SOURCE
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AC007785/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (24-NOV-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

3 (bases 1 to 16344)

SR Rat Genome Sequencing Consortium.

Direct Submission

Submitted (03-007-2002) Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Sep 18, 2002 this sequence version replaced gi:21731181.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). As a result, the sequence may extend beyond the ends of the clone and there may be contigs that consist entirely of whole genome shotgun sequence reads. Both and sequences and whole genome shotgun sequence only contigs will be indicated in the feature table.

Center: Baylor College of Medicine
Lorensuhewa, L., Loulseged, H., Lozado, R.J., Lu, X., Ma, J., Mahmeud, M., Mahmeu, R., Martinez, E., Mahmeug, S., McLeod, M. P., McNeill, T. Z., Meenen, E., Milosavljevic, A., Miner, G., Minja, E., Montemayor, J., Moore, S., Milosavljevic, A., Miner, G., Minja, E., Montemayor, J., Moore, S., Manderin, M., Norris, S., Nanderan, M., Norris, S., Nanderank, S., Paul, H., Perez, A., Perez, L., Perankoch, C., Palderak, C., Paul, H., Perez, A., Perez, L., Perankoch, C., Plondexter, A., Pepovic, D., Primus, E., Pu, L. L., Plopper, F., Poindexter, A., Popovic, D., Primus, E., Pu, L. L., Rachliy, M., Ren, Y., Regier, M. A., Reigh, R., Reilly, M., Ren, Y., Reuter, M., Richards, S., Riggs, F., Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruiz, S.J., Shet, Y., Sanders, W., Savery, G., Scherer, S., Soct, G., Shatsman, S., Shet, Y.J., Shartsbyra, A., Sodesyren, E., Song, X. -Z., Sortle, R., Taplor, C., Taylor, T., Thomas, M., Thomas, S., Tingey, A., Tabor, P., Taylor, C., Taylor, T., Thomas, M., Thomas, S., Tingey, A., Tabor, P., Taylor, C., Wallse, R., Wallsen, R., Wallsen, M., Malter, R., Wallsen, M., Walse, R., Wallsen, R., Wallsen, R., Wallsen, R., Wallsen, S., Wang, C., Wang, C., Wallsen, R., Walse, R., Weis, X., Wallsen, M., Walses, R., Wallsen, R., Walses, R., Wallsen, R., Walses, R., Wallsen, A., Walses, R., Chao, J., Yoon, L., Yoon, U., Weinschwarf, A., Walses, R., Chao, S., Dunn, D., von Meinscock, G. and Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html). NOTE: This is a "working draft' sequence. It currently consists of 12 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as arbitrary. Gaps between the contigs are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Center project name: GJMN
Center clone name: CH230-47A7
Center clone name: CH230-47A7
Center clone name: CH230-47A7
Assembly program: Phrap; version 0.990329
Consensus quality: 145314 bases at least Q40
Consensus quality: 149375 bases at least Q20
Estimated insert size: 230087; sum-of-contigs estimation
Quality coverage: 3x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Gaps

TITLE

COMMENT

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/note="predicted exon, program: grail2exons human 1.3, frame: 0, quality: good, score: 62.000-DDS similarity to overlapping ESTs:
N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
(171. 255); 95% identity.-AA283147 zt14d07.rl
NCI_CGPP GCB1 Homo sapiens cDNA,
clone IMAGE: 13101 5'; (164. .247); 92% identity.-AA143160
zl49d07.rl Soares pregnant uterus NbHPU Homo sapiens cDNA, clone S05261 5'; (44. .126); 100% identity.-N28707
yx66d11.rl Homo sapiens cDNA clone 266709 5'; (1. .66); 98% identity.-AA142801 z149d07.sl Soares pregnant uterus NbHPU Homo sapiens cDNA clone 266709 5'; (1. .66); 98% identity.-AA142801 z149d07.sl Soares pregnant uterus NbHPU Homo sapiens cDNA clone 266709 5'; (1. .66); 98% identity.-AA142801 z149d07.sl Soares pregnant uterus NbHPU
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2424...4451
//Dt_family="MER64"
4224...1451
//Lote="DDS similarity to overlapping ESTs:
//Lote="DDS similarity to overlapping ESTs:
//Lote="DDS similarity to overlapping ESTs:
//Lote="DDS similarity --AA283147 zt14d07.r1
//Lote="DDS similarity.--AA283147 zt14d07.r1
//Lote="DDS similarity.--AA283147 zt14d07.r1
//Lote="DDS similarity.--AA143160 zt149d07.r1
//Lote="DDS similarity.--AA143160 zt149d07.r1
//Lote="DDS similarity.--AA142881 zt149d07.s1 Soares pregnant uterus
//Lote="DDS similarity"/
//
      identity.~AA142881 z149d07.s1 Soares pregnant uterus NbHPU Homo sapiens cDNA clone 505261 3'; (570. .527); 64%
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/note="DDS similarity to N28707 yx66d11.r1 Homo sapiens
cDNA clone 266709 5'; (223. .246); 100% identity."
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/note="predicted exon, program: grail2exons human_1.3,
frame: 1, quality: excellent, score: 100.000"
complement(6148. .6443)
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/rpt family="(CA)n"
/rpt family="Alus". 1973)
/rpt family="Alus".
/rpt family="LINE2"
/rpt family="LINE2"
/rpt family="Alus".
/rpt family="Alus"
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/rpt family="(CA)n"
complement (7792. .8054)
/rpt family="MIR"
complement (8789. .9083)
/rpt_family="AluJo"
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complement(7118. 7340)
/rpt_family="MIR"
complement(7538. 7639)
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3841. .4060
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complement(6608. .6
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(12. .170); 99% identity.~AA283147 zt14d07.rl NCI CGAP GCB1
Homo sapiens CDNA clone IMAGE:713101 5'; (6. .163<sup>T</sup>); 99%
identity.~AA143160 z149407.rl Soares pregnant uterus NbHPU
Homo sapiens CDNA clone 505261 5'; (1. .43); 100%
                                                      Hominidae; Homo.

1 (bases I to 166500)

1 (bases I to 166500)

Burkhart-Schultz, K., Gordon, L., Scott, D., Johnson, G., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Danganan, L., Andreise, T., Amico-Keller, G., Coefield, J., Avila, J., Atix, C., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and Carrano, A.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 282485 overlaps cosmid R30477 to the left from bases 1 to 4,419 of this accession, and overlaps BAC 264576 (CIT-B-297N14; AC006262) from bases 146,203 to 166,500. Additional chromosome 19 map and sequence information may be obtained at:

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16025. .16122)

Though Hypotherical arginine-rich gene product;
Hypotherical CDS constructed from overlapping ESTs and Xgrail predictions. EST coverage is lacking for some portions of the CDS. Gene may be alternatively spliced, as multiple transcripts map into this region; alternatively these individual clones may represent artifactual events during RT and cDNA creation.
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MRGBEPAGETEDLTHKTGWFRENIECHMLESALTQSSESVTUDLLTYTDLESLRNRK
MGGREGSLAPRSAQLMSKRYLILIYSVEFDR HYPLDLPYQCSKPDPVVLQGITSSLKE
ELGRLQGLDGQNTRDTRENEIMHLREQVSRLASEKRELEAQLGRSREEALAGRAARQE
ABALMGLYGLBLELAQDREGGHRYWAGRRGQDCRKLAKELEBAKASRESLRAHLKTLT
SELLALYKRGGRGSRGRPARPSPSPTGGRALRFDFTARTAKKERSELRAHLKTLT
RLGSGGSGDGPSVSWSRQTQPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASGCSDL
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complement(177. .453)

/rpt_family="Aluub"

complement(472. .712)

/rpt_family="MIR"

/rpt_family="MIR"
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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/clone="c1T-B-344H19"
/lone lib="Cal Tech CIT-B BAC library"
/note="LLNL clone name: BC282485"
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/evidence=not_experimental
/product="BC282485.1"
/protein_id="AAD38244.1"
/db_xref="GI:5042405"
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Cambridgeshire, CB10 1SA, UK. E-mail enquiries: vega@ganger.ac.uk
Clone requests: clonerequest@sanger.ac.uk
On Oct 10, 2001 this sequence version replaced gi:15705207.
The following abbreviations are used to associate primary accession
numbers given in the feature table with their source databases:
Em:, EMBL; Sw:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information
on the WORMPEP database can be found at
http://www.sanger.ac.uk/Projects/C_elagans/wormpep This sequence
was generated from part of bacterial clone contigs of human
chromesome 9, constructed by the Sanger Centre Chromosome 9 Mapping
Group. Further information can be found at
http://www.sanger.ac.uk/HGP/Chr9
RPI1-280M4 is from the library RPCI-11.1 constructed by the group
of Pieter de Jong. For further details see
http://www.chori.org/bacpac/home.htm
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complement(AL352981.12:155681.155827),
complement(AL392085.12:155681.155827),
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complement(AL392085.12:191976.9206),
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complement(AL13284.13:15027.52175),
complement(AL13284.13:15027.52175),
complement(AL13284.13:15027.52175),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 300); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one subclone; and the assembly was confirmed by restriction digest, except on the rate occasion of the clone being a YAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Clone_left_end: RP11-280M4"
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complement(AL13284.13:52027...85496),
complement(AL13284.13:52027...85496),
complement(AL13282.15:4738...51629),
complement(AL137024.27:148000...148860))
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/organism="Homo sapiens"
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Web site: http://www.sanger.ac.uk
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12895. .12994
/note="DDS similarity to AA765166 nz79c05.81 NCI_CGAP_GCB1
Homo sapiens cDNA clone IMAGE:1301672; (222. .123); 97$
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Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
Hominidae, Homo.
1 (bases 1 to 166931)
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Direct Submission
Submitted (13-MAY-2005) Wellcome Trust Sanger Institute, Hinxton,
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frame: 1, quality: excellent, score: 92.000"
12847. .12908
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                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt family="AT rich"
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/rpt family="AT rich"
complement(11914...11976)
/rpt family="Alus"
complement(12055...12088)
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/rpt_family="Alus"
complement(10753. .11057)
/rpt_family="Alusx"
complement(11065. .11191)
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11322. .11619
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HTG; ASTN2; CpG island; KIAA0634.
HOMO sapiens (human)
Homo sapiens
                                        /rpt_family="MER5B"
complement(9539. .9841)
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                                                                                                                                             family="MER5B"
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Direct Submission Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 15A, UK. E-mail enquiries: humquerygeanger.ac.uk Clone requests: clonerequest@anger.ac.uk On Jun 21, 2002 this sequence version replaced gi:21213218.

During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above. This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em; EMBL; Sw; SWISSPROT; Tr:, TREMBL; Wp; WORMPEP; Information on the WORMPEP database can be found at the sequence of the s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL606976 169465 bp DNA linear ROD 20-JUN-2002 Mouse DNA sequence from clone RP23-113P22 on chromosome 4, complete sequence.
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
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from the RPCI-23 Mouse PAC Library
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For further details see http://www.chori.org/bacpac/home.htm
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                                                     /note="Clone_left_end: RP11-388N2'
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                                                                                                                                                                                                          Query Match 91.1%; Score 16.4; DB 8; Best Local Similarity 94.4%; Pred. No. 3.1e+02; Matches 17; Conservative 0; Mismatches 1;
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/db_xref="taxon:10090"
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/clone lib="RPCI-23"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94228 CCACACCTAGTCATACTC 94211
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL606976.25 GI:21537445
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                                                                                                                                                                                                                                                                                                                                                                                                                     1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
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          164932
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                misc feature
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AL606976/c
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KEYWORDS
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ASPGSPGSACTAARESRILLEYRNELPORIATORDEDTETPERMICHAGNEGITALIT
LILVEYVALYAQRRWQKRRRIPGKSASTETATETHYTPSVLGPQARESFRSSRLQTH
WRQQWLENGTYALYAQRRWQKRRRIPGKSASTETATETHYTPSVLLGPQARESFRSSRLQTH
NSVLGPQARESFRSSRLQTH
NSVLGPQARESFRSSRLQTH
NSVLGPQARESFRSSRLQTH
NSVLGPQARESFRSSRLQTH
SEKKGGISFRSKLGTTLAVS
SCILAMVCGSQRCPDARESFRSSKGLLKSPVNKTALTLAVS
SCILAMVCGQRCTANCVCBORDETGECSCHEGYAPDPWHRHCVRSDWGSSEG
PWPYTLERGYDLVTGEQAPEKILRSTFSLGGLWLPVSKSFVVPPVHRHCVRSDWGSSEG
PWPYTLERGYDLVTGEQAPEKILRSTFSLGGCIMLPVSKSFVVPPVHRHCVRSDWGSSEG
PWPYTLERGYDLVTGEQAPEKILRSTFSLGGCIMLPVSKSFVVPPVHRHCVRSDWGSSEG
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PWPYTLERGYDLVTGEQAPEKILRSTFSLGGCIMLPVSKSFVVPRDATSSTIFM
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EAFKSALMSSYWCSGKGDVIDDMCKDLSAFDANGLPVTGEFLESPADDLLSGGLTSCVAA
GRSHGEVPRVSTSYTKTATACPLVDDNK
GRSHGEVPRVSTSYTKTATACPLVDDNK
                                                                                                                                                                                                                                H11271.1 TUGB59.1 TL2623.1 TL2623.

H11271.1 TUGB59.1 TL2623.1 TL2623.1 MP116573

AF116573.1 AF116574 AF116574.1 U48797"

join (complement (126444. .126885), complement (3274. .3461), complement (ALJ55608.11.56896. .57280), complement (ALJ55608.11.56896. .57280), complement (ALJ52086.12.125681. .155827), complement (ALJ32085.12.125681. .155827), complement (ALJ32085.12.123563. .92647), complement (ALJ32085.12.123563. .92647), complement (ALJ32085.12.191976. .92050), complement (ALJ32085.12.191976. .92050), complement (ALJ57829.24.141920. .91270), complement (ALJ57829.24.11736. .91870), complement (ALJ57829.24.11736. .11860), complement (ALJ57829.24.11736. .11860), complement (ALJ57829.24.11736. .11860), complement (ALJ32829.13.1359. .7433), complement (ALJ32829.13.1359. .7433), complement (ALJ32829.13.1359. .7433), complement (ALJ3284.13.13529. .52175), complement (ALJ3284.13.52027. .52175), complement (ALJ33284.13.52027. .52175), complement (ALJ33284.13.52027. .52175), complement (ALJ33284.13.52027. .52175)
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/db_xref="InterPro:IPR01862"
/db_xref="InterP
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/note="match: proteins: 014525 060799 075129 075998 Q61137
Q9QY74 Q9UHW6"
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DELGPRKAHLILRRLERVSSHCSSLLRSAYIQSRVETVPYLFCRSEEVRPAGMVWYSI
/note="match: ESTs: AA099036.1 AA371047.1 AA430277.1 AA677654.1 AI499778 AL079991 AU133297.1 AW347402 AW347402.1 AW340774.1 BE7512213.1 BF315314 BF315314.1 BF338569 BF338569.1 B1197478.1 CA357296.1 H09468 H11271.1 T08839.1 T12623.1 T19257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Clone_right_end: RP11-567J2"
12384. 123876
/note="Single clone region. Assembly confirmed by
restriction digest data."
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complement (AL133282.15:4738. .4921),
complement (AL137024.27:148623. .148860))
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="ASTN2'
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DEFINITION

ACCESSION VERSION KEYWORDS

RESULT 52 CR385076

ORGANISM

TITLE JOURNAL

COMMENT

REFERENCE AUTHORS

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Legister 1. Libron, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Beda, F., Boguslavkiy, L., Anderson, S., Baldwin, J., Barna, N., Beda, F., Boguslavkiy, L., Boukgalter, B., Brown, A., Burkett, G., Campoplano, A., Castle, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Domino, M., Doyle, M., Fenrestor, J., Ferreira, P., Fitzlugh, W., Forrest, C., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Karatas, A., Klein, J., Landers, T., Largocque, K., Lehoczky, J., Levine, R., Klein, J., Landers, T., Largocque, K., Lehoczky, J., Levine, R., McEwran, P., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Naylor, J. Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Roy, A., Santos, R., Schauer, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigilio, J., Young, G., Zainoun, J., Zimmer, A. and Zody, M., Wyman, D., Ye, W.J., Young, G., Zainoun, J., Zimmer, A. and
                                                                 AC024399 185323 bp DNA linear HTG 04-JUN-2000
Homo sapiens clone RP11-516D7, WORKING DRAFT SEQUENCE, 12 unordered
                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (28-FEB-2000) Whitehead Institute/MIT Center for Genome Submitted (28-FEB-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jun 4, 2000 this sequence version replaced gi:7342078.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
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Center: Whitehead Institute/ MIT Center for Genome Research
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Insert size: 188000; agarose-fp
Insert size: 184223; sum-of-contigs
Quality coverage: 4.7 in Q20 bases; sum-of-contigs
Quality coverage: 4.8 in Q20 bases; sum-of-contigs
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Sequencing vector: M13, M77815; 100% of reads

Chemistry: Dye-terminator Big Dye; 100% of reads

Assembly program: Phrap; version 0.960731

Consensus quality: 17490 bases at least Q20

Consensus quality: 182245 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae, Homo.

1 (bases 1 to 185323)

Birren, B., Linton, L., Nusbaum, C. and Lander, E.
Homo sapiens, clone RP11-516D7
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                                                                                                                                                                                                                     AC024399.3 GI:8247873
HTG; HTGS PHASE1; HTGS_DRAFT.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 185323)
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                                                                                                                                                                                                                                                                                                                                         Homo sapiens
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                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
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JOURNAL
RESULT 53
AC024399
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JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                      ACCESSION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems; such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em:, SMISSPROT; Tr., TREMBL; WD:, WORMPEP; Information on the WORMPEP database can be found at
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://www.sanger.ac.uk/Projects/C_elegans/wormpep Clone-derived bebrafish pUC subclones occasionally display inconsistency over the length of mononucleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                  CR385076 172382 bp DNA linear VRT 03-MAY-2005
Zebrafish DNA sequence from clone DKEY-230H18 in linkage group 2,
                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Actinopterygii, Neopterygii, Teleostei, Ostariophysi,
Cypriniformes, Cyprinidae, Danio.
...
(bases 1 to 172382)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (03-MAY-2005) Wellcome Trust Sanger Institute, Hinxton, cambridgeshire, CB10 1SA, UK. E-mail enquirites: zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on Apr 28, 2005 this sequence version replaced gi:62909866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat names beginning 'Dr' were identified by the Recon repeat
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Pred. No. 3e+02;
n· Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://www.sanger.ac.uk
Contact: zfish-help@sanger.ac.uk
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                                                                                                                                                                                      CR385076.8 GI:62954692
                                                                                                                                                                                                                                                               Danio rerio (zebrafish)
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94.4%;
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                                                                                                                complete sequence
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les 17; Conserv
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FEATURES

Matches

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This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                             0: contig of 1520 bp in length
0: gap of 100 bp
0: gap of 100 bp
0: gap of 100 bp
1: contig of 2564 bp in length
4: gap of 100 bp
1: contig of 3757 bp in length
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1: contig of 8136 bp in length
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During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality) as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em: EMBL; Sw: SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information on the WORMPEP and atabase can be found at
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROD 25-JUL-2002
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Mouse DNA sequence from clone RP23-426N4 on chromosome 4, complete
sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
Submitted (25-UUJ-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: hunguery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on Jul 25, 2002 this sequence version replaced gi:21738473.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://www.sanger.ac.uk/Projects/C_elegans/wormpep RP23-426N4 is from the RPCI-23 Mouse PAC Library constructed by the group of Pieter de Jong. For further details see http://www.chori.org/bacpac/home.htm
                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                             Length 185323;
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                          Score 16.4; DB 14;
Pred. No. 3e+02;
0; Mismatches 1;
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Center: Wellcome Trust Sanger Institute
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Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                          Query Match
91.1%;
Best Local Similarity 94.4%;
Matches 17; Conservative 0
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AL671173/c
LOCUS
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ORGANISM
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AUTHORS
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JOURNAL
                                                                                       gap
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KEYWORDS
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1 (Dases I to 203355)

2 (Dases I to 203355)

Allen, C. Allen, Alabrooks, S., Amin, A., Amuniano, D., Anyalabechi, V., Avgaci, M., Ayodeji, M., Bacac, E., Baden, H., Baldin, C., Allen, H., Alabrooks, S., Amin, A., Anguiano, D., Anyalabechi, V., Avgaci, A., Ayodeji, M., Bacac, E., Baden, H., Baldin, D., Barter, C., Cades, M., Benahmed, F., Baldin, D., Balt, G., Blat, J., Barbenburg, H., Garderon, B., Garder, M., Carder, A., Chavez, D., Chen, C., Ceavaco, I., Ceasar, H., Center, A., Chacko, J., Chavez, D., Chen, C., Chor, R., Chen, T., Caderich, D., Davila, M., Carder, M., Cree, A., D'Souza, L., Caderon, E., Caderich, D., Davila, M., Dagan-Rochad, C., Davy-Carroll, L., De Anda, C., Dederich, D., Davila, M., Carder, M., Cacker, D., S., Dema, A., Darbin, H., Divya, K., Egan, A., Escotto, M., Edagon, C., Porte, C., Paval, C., Paval, C., Parandez, J., Falley, M., Edagon, S., Dann, M., Garter, M., Gabrer, M., Mandoul, M., Loulseged, H., London, P., London, P., London, P., London, P., London, P., Martin, R., Pally, M., Martin, R., Pally, M., Rent, Y., Reurer, M., Reves, R., Marten, S., Sender, S., Sender, S., Sender, S., Sander, M., Sander, M., Mang
                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus clone CH230-165P8, *** SEQUENCING IN PROGRESS ***, 3 unordered pieces.
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Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia,
Sciurognathi, Muroidea, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                 Score 16.4; DB 9; Length 201741; Pred. No. 3e+02; 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC123163.5 GI:30579265
HTG; HTGS PHASB1; HTGS DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
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                                                                                                                                                                                                                                                                                          1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 209355)
                                                                                                                                                                 ch 91.1%;
1 Similarity 94.4%;
17; Conservative (
                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 55
AC123163
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
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KEYWORDS
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Submitted (13-MMY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On May 13, 2003 this sequence version replaced gi:25188596.

The sequence in this sequence version replaced gi:25188596.

The sequence in this assembly is a combination of BAC based reads and whole genome shocqun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ms to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads.
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* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a 'working draft' sequence. It currently

* consists of 3 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N. but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (29-MAY-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases I to 209355)

Rat Genome Sequencing Consortium.
Williams, G., Willson, R., Wleczyk, R., Wooden, H., Worley, K., Wright, D., Wright, R., Wu, J., Yakub, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Weinstock, G. and Gibbs, R.A.
Direct Submission
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Consensus quality: 190762 bases at least Q40
Consensus quality: 194365 bases at least Q30
Consensus quality: 197548 bases at least Q20
Estimated insert size: 204166; sum-of-contigs estimation
Quality coverage: 5x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 182365: contig of 182365 bp in length
18366 182465: gap of unknown length
182466 208006: contig of 25541 bp in length
208107 208106: gap of unknown length
208107 208355: contig of 1249 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center: Baylor College of Medicine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center project name: GMNO
Center clone name: CH230-165P8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 i. .1679
/note="wgs_end_extension
clone_end:Sp6"
3627. .4180
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/db xref="taxon:10116"
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                                                                                                                                                                                                                                                                                       (bases 1 to 209355)
                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
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                                                                                                                                                                                                                                             Unpublished
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gap

gap ORIGIN

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1. .1081
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JOURNAL
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AUTHORS
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TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schurognathi, Murchade; Murchae; Rattus.
Schurognathi, Murchade; Murchae; Rattus.
Schurognathi, Murchade; Murchae; Marchae, Adams, C., Alder, J.,
Allen, C., Allen, H., Alabrooks, S., Amil, A., Anguano, D.,
Anyalebech, V., Aoyagi, A., Ayodeji, M., Barnstead, M., Benahmed, F.,
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Fraser, C., M., Gabisi, A., Ganter, T., Gerer, P.,
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Hernandez, R., Hines, S., Huadun, S.L., Honderson, N., Hernandez, R.,
Havey, Y., Haulak, P., Hawes, A., Henderson, N., Hernandez, T.,
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Maheshwari, M., Mahindarthe, M., Mahindare, M., Mahindare, M., Mahindare, M., Martin, K., Martin, R., Martin, R., Mankervis, C., Neal, D., Newton, N., Plugges, F.,
Plugoper, F., Poindexter, A., Poordon, P., Pinms, E., Pul, L.-L.,
Plugoper, R., Poindexter, A., Poordon, S., Riggs, F.,
Plugoper, R., Reilly, M., Ren, Y., Reese, M., Ratinks, S., Pauk, R.,
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Rives, C., Rodkey, T., Rose, M., Rese, R., Reger, R., Reilly, R., Reilly, R., Sanders, S., Scott, G., Scherer, S., Scott, G., Shen, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC118365 212446 bp DNA linear HTG 08-OCT-2002
Rattus norvegicus clone CH230-273H4, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Glires, Rodentia,
Sciurognathi, Muroidea, Muridae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                     Score 16.4; DB 14; Length 209355;
Pred. No. 3e+02;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC118365.3 GI:22856535
AC118365.3 GI:22856535
HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                       /estimated length=unknown 208007. .208106
                                                                                                                                                                                                                                                                                          /estimated_length=unknown
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16474. .18153
'note="clone boundary
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182366. .182465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  203249 ccacaccarrcaracrc 203266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CCACACCTATTCATACTC 18
                              clone_end:Sp6
site:EcoRI
                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 94.4%;
Matches 17; Conservative
                                                                                                                               misc_feature
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AC118365/c

RESULT 56

g

ACCESSION VERSION

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS

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Submitted (08-00T-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
ON Sep 14, 2002 this sequence version replaced gi:21745733.

The sequence in this assembly is a combination of BAC based reads and whole genome sheepun sequencing reads assembled using Atlas (http://www.ngsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-caffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome
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CONTE: This is a "working draft' sequence. It currently
consists of 1 contigs. Gaps between the contigs
are represented as runs of N. The order of the pieces
is beliaved to be correct as given, however the sizes
of the gaps between them are based on estimates that have
provided by the submittor.

This sequence will be replaced
by the finished sequence as soon as it is available and
the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 212446)
Worley, K.C.
Direct Submission
Submitcs (17-APR-2002) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
Shetty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Sneed, A., Sodergren, E., Song, X.-Z., Sorelle, R., Sosa, J., Steimle, M., Strong, R., Sutten, A., Tabor, P., Taylor, C., Taylor, T., Thomas, N., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Vera, V., Villasana, D., Waldron, L., Walker, B., Wang, C., Wang, S., Warren, J., Warren, R., Wei, X., White, F., Williams, G., Willson, R., Wid, S., Yen, J., Yoon, L., Yoon, Y., Kright, D., Wright, D., Wright, R., Wooden, H., Worley, K., Widerhausern, A., Weiss, R., Smith, S., Dunn, D., von Weinstock, G. and Gibbs, R.A.
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Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center: Baylor College of Medicine
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Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center project name: GTTT
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3702.
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Ruany, Damzie, Metzker, M. Lee., Abramzon, S., Adame, C., Alder, J., Allen, H., Abbrooks, S., Amin, A., Anguiano, D., Angleani, H., Abbrooks, S., Amin, A., Anguiano, D., Anglen, H., Barberoks, S., Amin, A., Anguiano, D., Anglen, H., Bandaranalie, D. Barber, M. Barastead M., Benahmed, F., Blawalo, K., Blair, J., Blankenburg, K.; Blyth, P., Brown, H., Carler, A., Carter, A., Carter, M., Carter, M., Carter, A., Carter, M., Durblin, K., Dayan, K., Dagan-Roche, S., Danta, R., Carte, M., Garcia, A., Garner, T., Garza, M., Gebregocygis, E., Ger, K., Gill, R., Garcia, A., Garner, T., Garza, M., Gebregocygis, E., Ger, K., Gill, R., Grady, M., Guevara, M., Gebregocygis, E., Ger, K., Gill, R., Grady, M., Guevara, M., Gebregocygis, E., Ger, K., Gill, R., Garcia, A., Garner, T., Garza, M., Gebregocygis, E., Ger, Hines, S., Hadun, S. L., Hodgson, A., Hogues, M., Harnandez, R., Halaun, S. L., Handlin, S. L., Wan, J., Man, J., Man, J., Man, M., Man, J., Man,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus clone CH230-49Pl1, *** SEQUENCING IN PROGRESS ***, 4 unordered pieces.
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                                                                                                                                                                                                             Length 212446;
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sclurognathi; Muroidea; Muridae; Murinae; Rattus.
                                                                                                                                                                                           Score 16.4; DB 14; Length Pred. No. 3e+02; O: Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC097131.7 GI:30520752
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                       Query Match
91.1%; Score 16.4; Di
Best Local Similarity 94.4%; Pred. No. 3e+0;
Matches 17; Conservative 0; Mismatches
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210901. .212446
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                                                                                                                                                                                                                                                                                                                           1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC097131
                                 misc_feature
                                                                                        misc_feature
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AC097131
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KEYWORDS
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SOURCE

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Dases 1 to 221055)

Sat Genome Sequencing Consortium.

Direct Submission.

Direct Submission.

Direct Submission.

Direct Submission.

Submitted (10-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On May 10, 2003 this sequence version replaced gi:25091251.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas and whole genome shotgun sequencing reads assembled using Atlas in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold', individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold' that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence contigs will be indicated in the feature
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(see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft data.html).

* NOTE: This is a 'working draft' sequence. It currently

* consists of 4 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                            Worley, K.C.

Direct Submission

Submitted (11-OCT-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Consensus quality: 197551 bases at least Q40 Consensus quality: 200898 bases at least Q30 Consensus quality: 202942 bases at least Q20 Estimated insert size: 202042 bases at least Q20 Estimated insert size: 205057; aum-of-contigs estimation Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
Wang, O., Wang, S., Warren, J., Warren, R., Wei, X., White, F., Williams, G., Willson, R., Wleczyk, R., Wooden, H., Worley, K., Wright, D., Wright, R., Wu, J., Yakub, S., Yen, J., Yoon, L., Yoon, Yu, F., Zhang, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Direct Submission
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42745: gap of unknown length
173337: contig of 136592 bp in length
173437: gap of unknown length
218852: contig of 45415 bp in length
221055: contig of 2103 bp in length
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Center: Baylor College of Medicine
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/db_xref="taxon:10116"
/clone="CH230-49911"
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                                                                                                                                                                                                                                                                                         Unpublished
2 (bases 1 to 221055)
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Levine, R., Lindblad-Toh, K., Liu, G., Liu, X., Lui, A., Mabbitt, R., MacLean, C., Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M., Maldrim, J., Meneaus, L., Mihova, T., Maergay, V., Murphy, T., Naylor, J., Muyen, C., Muyen, T., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phurkhang, P., Pierre, M., Rachupka, A., Ramasamy, U., Raymond, C., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, M., Savery, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, M., Stubbs, M., Talamas, J., Tesfaye, S., Theodore, J., Tophan, K., Travers, M., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.

Direct Submission

Submitted (0.3-APR-2004) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Apr 3, 2004 this sequence version replaced gi:44886440.

All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1995-1997)

http://ftp.genome.washington.edu/RM/RepeatMasker.html
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Center: Whitehead Institute/MIT Center for Genome Research
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26129: gap of 100 bp
35243: contig of 9114 bp in length
35343: gap of 100 bp
44075: contig of 8732 bp in length
58702: contig of 14527 bp in length
58702: contig of 14527 bp in length
122664: gap of 100 bp
122764: gap of 100 bp
132764: gap of 100 bp
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186673; contig of 52618 bp in length
186773; gap of 100 bp
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198283: gap of 100 bp
219225: contig of 20942 bp in length
219325: gap of 100 bp
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: sequence_submissions@broad.mit.edu
-------- Project Information
Center project name: L22740
Center clone name: 416_K_3
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/mol_type="genomic DNA"
/db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                             Query Match 91.1%; Score 16.4; DB 14; Length 221055; Best Local Similarity 94.4%; Pred. No. 3e+02; Matches 17; Conservative 0; Mismatches 1; Indels 0;
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HTG; HTGS_PHASE1; HTGS_FULLTOP; HTGS_ACTIVEFIN.
Mus musculus (house mouse)
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Mus musculus chromosome 17, clone RP23-416K3
      /note="wgs_contig"
42646. .42745
/estimated length=unknown
51725. .52966
/note="wgs_contig"
173338. .173437
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ORIGIN

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11412: contig of 11412 bp in length
11512: gap of unknown length
221397: contig of 209885 bp in length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 221397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Worley, K.C.
Direct Submission
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AUTHORS
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JOURNAL
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1 (Joses 1 to 22139)

2 (Joses 2)

3 (Joses 1 to 22139)

4 (Joses 1 to 22139)

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Rattus norvegicus clone CH230-184P12, WORKING DRAFT SEQUENCE, 2
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Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Pred. No. 3e+02;
0; Mismatches 1; Indels
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HTG: HTGS PHASEL; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus
Rattus norvegicus
                                                                                                                                                                                                                                                                               /estimated_length=100
219226. .219325
                                                                                                                                                                                                                          /estimated_length=100
198184. .198283
/estimated length=100
122665. .122764
/estimated length=100
130127. .130226
                                                                                                          /estimated_length=100
133956. .134055
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186674. .186773
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Best Local Similarity 94.4%;
Matches 17; Conservative
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VERSION
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Direct Submission

Submitted (13-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Daylor Plaza, Houston, TX 77030, USA

on May 13, 2003 this sequence version replaced gi:23268156.

The sequence in this sequence version replaced gi:23268156.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold') within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads.
Reilly, B., Reilly, M., Ren, Y., Reuter, M., Richards, S., Riggs, F., Sanders, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruiz, S.J., Sanders, W., Savery, G., Scherer, S., Scott, G., Shatsman, S., Shen, H., Shetty, J., Shvartsbeyn, A., Schson, I., Sitter, C.D., Smajs, D., Sneid, A., Sodergren, E., Song, X.-Z., Sorelle, R., Soa, J., Steimle, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, C., Taylor, T., Thomas, N., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Varana, D., Walker, B., Wang, J., Wang, G., Wallson, R., Walcan, D., Walker, B., Wang, J., Wallson, R., Walcan, M., Wooden, H., Worley, K., Willison, R., Wuezzy, R., Wooden, H., Worley, K., Willison, R., Wu, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Winsteck, G. and Gibbs, R., Smith, D. R., Holt, R.A., Smith, H.O., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * NOTE: Estimated insert size may differ from sequence length

* NOTE: This is a "working draft" sequence. It currently

* Consists of 2 contigs. The true order of the pieces

* is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (01-NOV-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA 3 (bases 1 to 221397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
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'mol_type="genomic DNA"

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Search completed: May 10, 2006, 19:26:09
Job time : 1996 secs
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Direct Submission
Submitted (25-MAY-2005) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
3 (bases: 1 to 226160)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Butheria, Buarchontoglires, Glires, Rodentia, Sciurognathi, Muroidea, Muridae, Murinae, Mus.

1 (bases 1 to 226160)
Kanchi, K., Kozlowicz, A., Levy, A., Bielicki, L. and Haglund, K.
The sequence of Mus musculus BAC clone RP23-126K16
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC162180 226160 bp DNA linear ROD 30-JUL-
Mus musculus BAC clone RP23-126K16 from chromosome 9, complete
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Center code: WIGSC
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Pred. No. 3e+02;
0; Mismatches 1;
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Contact: submissions@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center project name: M_BA0126K16
Drafting center: WIBR
                                                                                                                                                                                                                               /estimated length=unknown 11513. .13645 /note="wgs contig" complement (205657. .206268)
                                                  /note="wgs_end_extension
clone_end:Sp6"
1670. ...2134
                                                                                                                                                                                                                                                                                                                                                                                              /note="wgs_end_extension
clone_end:T7"
/db_xref="taxon:10116"
/clone="CH230-184P12"
                                                                                                                                                           end_sequence:BH261431"
                                                                                                                                                                                                                                                                                                                                                            end_sequence:BH261429"
218210. .221397
                                                                                      1670. . . 2134 /
/note="clone boundary
clone_end:Sp6
site:EcoRI
                                                                                                                                                                                                                                                                                                          'note="clone_boundary
                                                                                                                                                                        7248. .9324
/note="wgs_contig"
11413. .11512
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Mus musculus
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AC162180.2 GI:71533498
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                                                                                                                                                                                                                                                                                                                           clone_end:T7
site:EcoRI
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Best Local Similarity 94.4%;
Matches 17; Conservative
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SOURCE
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AC162180
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NOTICE:
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This sequence was finished as follows unless otherwise noted:
all regions were double stranded, sequenced with an alternate
chemistry, or covered by high quality data (i.e. phred quality
>=30); an attempt was made to resolve all sequencing problems, such
as compressions and repeats; all regions were covered by at least
one plasmid subclone, fosmid clone or direct clone walk sequence.
Sequence from the Mouse Genome Sequencing Consortium whole genome
shotgun may have been used to obtain the consensus sequence. The
assembly was confirmed by restriction digest.
This finishing standard has slightly changed from the previous
Human standard. Specifically, standards for regions of low sequence
complexity (such as dinucleotide repeats and small unit tandem
repeats) have been relaxed. These regions are very prevalent in the
mouse genome, and the return on extended finishing efforts is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mapping information for this clone was provided by Dr. Wes Warren, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     If a sequence meets the criteria of the above statement, it needs no comments or tags. If the criteria are not met, such as ambiguous bases, then the region is duly annotated.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE INFORMATION:
The BAC Library has been constructed by Kazutoyo Osegawa and Minako Tateno in the laboratory of Pieter de Jong (http://www.chori.org) from female C57BL/6J mouse kidney and/or barin genomic DNA. The clone and detailed information can be obtained from Research Genetics, Inc. (http://www.resgen.com) or Pieter de Jong and coworkers at http://www.chori.org
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94.4%; Pred. No. 3e+02;
ive 0; Mismatches 1; Indels 0;
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/note="Unresolved simple sequence repeat."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence is the entire insert of the clone.
Location/Qualifiers
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/organism="Mus musculus"
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/chromosome="9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'clone="RP23-126K16"
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ALIGNMENTS

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Human PLA2G1B fragment hybridising extension oligonucleotide.
           ADI35111 standard; DNA; 18
                                                           (first entry)
                                                          22-APR-2004
                                    ADI35111;
AD135111

ID AD1

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sapiens

Homo

The invention relates to diagnosing a predisposition to fat deposition or leanness in a subject comprising detecting the presence or absence of a polymorphic variation associated with fat deposition at a polymorphic site in a PLA2G1B nucleotide sequence in a nucleic acid sample from a subject, where the presence of the polymorphic variation is guanine at position in the subject. The polymorphic crite present sequence. The method is useful for diagnosing a predisposition to fat deposition or leanness in a subject, and consequently for diagnosing a predisposition to fat deposition or leanness in a subject, and consequently for diagnosing a predisposition to non-insulin dependent diabetes mellitus (NIDDM) in a subject and conditions such as hypertension, glucose intolerance, dyslipidemia, hypertension, glucose intolerance, dyslipidemia, prescription of preventive measures. Sequences ADISSIO4 ADISSIO3 represent exemplary extension oligonucleotides that hybridise to a region of the PLA2G1B sequence that is adjacent to the polymorphic variation. Diagnosing a predisposition to fat deposition or leanness, useful for diagnosing a predisposition to e.g. diabetes or hypertension, comprises detecting the presence of a polymorphism in the PLA2GIB nucleic acid from ss; human; fat deposition; phospholipase A2; PLA2G1B; appetite suppressant; lipase inhibitor; exercise regimen; obesity; non-insulin dependent diabetes mellitus; NIDDM; cardiovascular disorder; hypertension; antidiabetic; primer; fat reduction. Gaps PLA2GIB; fat deposition; leanness; single nucleotide polymorphism; non-insulin dependent diabetes mellitus; NIDDM; hyperinsulinemia; hypertension; glucose intolerance; dyslipidemia; hypercoagulability; microalbuminuria; ss; SNP. ; 0 DB 12; Length 18; 11; Indels Extension DNA oligo 3 for human phopholipase A2 DNA. Sequence 18 BP; 5 A; 8 C; 0 G; 5 T; 0 U; 0 Other; . Match
Local Similarity 100.0%; Score 18; DB
Local Similarity 100.0%; Pred. No. 11;
es 18; Conservative 0; Mismatches Claim 8; Page 63; 91pp; English. 1 CCACACCTATTCATACTC 18 ВР 27-JUN-2002; 2002US-0392361P. 27-JUN-2003; 2003WO-US020830. ADJ10012 standard; DNA; 18 17-JUN-2004 (first entry) Langdown ML; (SEQU-) SEQUENOM INC. WPI; 2004-082843/08. WO2004002295-A2. sapiens. detecting th the subject. 08-JAN-2004 Adam GIR, Synthetic Query Match Best Loc Matches Homo RESULT 2

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WO200260317-A2
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12-JUL-2001; 2
20-AUG-2001; 2
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28-APR-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention relates to a novel candidate therapeutic agent useful for reference on and disorders related to fat depositions. Specifically, it refers to polymorphic variations in the phospholipase A2 (PLAZGIB) DNA, which is located on chromosome 12424 and has been associated with central fat deposition. The present invention describes methods to detect the presence or absence of these single nucleotide polymorphisms of PLAZGIB, in particular G1928A and T9182G, and subsequently provide treatment that reduces fat deposition. This treatment may consist of an appetite suppressant, a lipsae inhibitor, a phospholipase inhibitor, an exercise regimen, a dietary regimen, psychological counselling, psychotherapy or a psychotherapeutic. Accordingly, PLAZGIB is a target for reducing fat deposition and it can be used to treat both obesity and non-insulin chependent diabetes mellitus (NIDDM), as well as cardiovascular disorders such as hypertenaion. As such, it exhibits antidiabetic activity. This coligonal counselling used for genotyping
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                                                                                                                                                                                                                                                                                                                                                   Identifying a candidate therapeutic for fat reduction, useful for treating diabetes, by introducing a test molecule to a system comprising PLA2GIB protein or nucleic acid, and determining the presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                            Denissenko MF, Dennis E,
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                                                                                                                                                                                                                                                                                                                                                                                                                        interaction between the compounds.
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                                                                                                         27-JUN-2003; 2003WO-US020831
                                                                                                                                                     27-JUN-2002; 2002US-0392362P
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                                                                                                                                                                                                   (SEQU-) SEQUENOM INC
                                                                                                                                                                                                                                                                                                            WPI; 2004-071944/07
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The invention relates to an isolated polynucleotide (I) comprising: (a)
any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b)
complements of (a); (c) sequences consisting of at least 20 contiguous
residues of (a); (d) sequences that hybridize to (a), under moderately
stringent conditions; (e) sequences having at least 75 or 90% identity
c to (a); or (f) degenerate variants of (a). Polypeptides (ABP68596-
C ABP68637) encoded by (I) and oligonucleotide can be used to detect cancer
in a patient and compositions comprising polypeptides, polynucleotides,
antibodies, fusion proteins, T cell populations and antigen presenting
cells expressing the polypeptide are useful in treating pancreatic cancer
and stimulating an immune response. The polynucleotides can be used as
probes or primers for nucleic acid hybridisation, in the design and
preparation of ribozyme molecules for inhibiting expression of the tumour
polypeptides and proteins in the tumour cells, in vaccines and for gene
therapy. Note: The sequence data for this patent did not form part of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated polynucleotide and pancreatic tumor polypeptides, useful for diagnosing, preventing and/or treating cancer, particularly pancreatic
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cytostatic, tumour; gene; ss.
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                                                                                                                                                                                                                                                                                                                                                                     Lodes MJ, Persing DH,
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2001US-0287112P.
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2001US-0305484P.
2001US-0313999P.
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                                                                                                                                                                                                                 27-NOV-2001; 2001US-0333626P
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Matches 18; Conservative
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                                                                                                                                                                                                                                                                                             (CORI-) CORIXA CORP
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WO200260317-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABV98622;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated polymucleotide (I) comprising: (a) any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b) complements of (a); (d) sequences consisting of at least 20 contiguous residues of (a); (d) sequences that hybridize to (a), under moderately stringent conditions; (e) sequences having at least 75% or 90% identity to (a); or (f) degenerate variants of (a). Polypeptides (ABP68596 antibodies, fusion proteins, T cell populations and antigen presenting antibodies, fusion proteins, T cell populations and antigen presenting cells expressing the polypeptide are useful in treating pancreatic cancer in a patient and compositions of the polypuble are useful in treating pancreatic cancer and stimulating an immune response. The polymucleotides can be used as probes or primers for nucleic acid hybridisation, in the design and proteins in the tumour cells, in vaccines and for gene therapy. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pot_sequences
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                                                                                                                                                                     New isolated polynucleotide and pancreatic tumor polypeptides, useful for diagnosing, preventing and/or treating cancer, particularly pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                       Persing DH, Hepler WT, Jiang Y;
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Best Local Similarity 100.0%; Score 18; DB 6; Length 224;
Matches 18; Conservative 0; Mismatches من تسخمات
                                                                                                                                                                                                                     Claim 1; SEQ ID NO 3941; 300pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human pancreatic cancer expressed cDNA SEQ ID NO 3110.
                                                                                                                       Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABV97702 standard; cDNA; 224 BP
09-FEB-2001; 2001US-0267568P.
21-MAR-2001; 2001US-0278651P.
28-APR-2001; 2001US-0287112P.
16-MAY-2001; 2001US-0291631P.
12-UUL-2001; 2001US-0305484P.
20-MUS-0011; 2001US-0313659P.
27-NOV-2001; 2001US-0313626P.
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31-JAN-2001; 2001US-0265682P.
09-FEB-2001; 2001US-0267568P.
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                                                                                                                       Kalos MD,
                                                                                                                                           WPI; 2002-627435/67.
                                                                                                (CORI-) CORIXA CORP.
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                                                                                                                      Benson DR,
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The invention relates to an isolated polynucleotide (I) comprising: (a)

any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b)

complements of (a); (c) sequences consisting of at least 20 contiguous

residues of (a); (d) sequences that hybridize to (a), under moderately

criniques of (a); (d) sequences having at least 75 or 904 identity

criniques of (a); (d) sequences having at least 75 or 904 identity

co (a); or (f) degenerate variants of (a). Polypeptides (ABP68596-

CC ABP68637) encoded by (I) and oligonucleotides (ABP68596-

calls expressing the polypeptide are useful in treating pancreatic cancer

and stimulating an immune response. The polynucleotides can be used as

probes or primers for nucleic acid hybridisation, in the design and

preparation of ribozyme molecules for inhibiting expression of the tumour

polypeptides and proteins in the tumour cells, in vaccines and for gene

therapy. Note: The sequence date for this patent did not form part of the

crinical specification, but was obtained in electronic format directly
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated polynucleotide and pancreatic tumor polypeptides, useful f
diagnosing, preventing and/or treating cancer, particularly pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                             Lodes MJ, Persing DH, Hepler WT, Jiang Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; pancreas; cancer; gene therapy; vaccine; immunostimulant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 3110; 300pp + Sequence Listing; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human pancreatic cancer expressed cDNA SEQ ID NO 4030.
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28-APR-2001; 2001US-0287112P.
16-WAY-2001; 2001US-0291631P.
12-JUL-2001; 2001US-0305484P.
20-AUG-2001; 2001US-03133626P.
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31-JAN-2001; 2001US-0265682P.
09-FEB-2001; 2001US-0267668P.
21-MAR-2001; 2001US-0278681P.
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                     Benson DR, Kalos MD,
                                                                                                                                                                                                                                             (CORI-) CORIXA CORP.
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Benson

cancer

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The invention relates to an isolated polynucleotide (I) comprising: (a)

any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b)

complements of (a); (d) sequences consisting of at least 20 contiguous

residues of (a); (d) sequences that hybridize to (a), under moderately

cresidues of (a); (d) sequences having at least 75% or 90% identity

co (a); or (f) degenerate variants of (a). Polypeptides (ABP68596-

ABP68637) encoded by (I) and oligonucleotide can be used to detect cancer

in a patient and compositions comprising polypeptides, polynucleotides,

antibodies, fusion proteins; T cell populations and antigen presenting

cells expressing the polypeptide are useful in treating pancreatic cancer

and stimulating an immune response. The polynucleotides can be used as

probes or primers for nucleic acid hybridisation, in the design and

probes or primers for nucleic acid hybridisation, in the design and

properation of ribozyme molecules for inhibiting expression of the tumour

polypeptides and proteins in the tumour cells, in vaccines and for gene

therapy. Note: The sequence data for this patent did not form part of the

printed specification, but was obtained in electronic format directly

from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                        New isolated polynucleotide and pancreatic tumor polypeptides, useful for diagnosing, preventing and/or treating cancer, particularly pancreatic
                                                                                                                                                                       Lodes MJ, Persing DH, Hepler WT, Jiang Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human, pancreas, cancer; gene therapy; vaccine; immunostimulant;
cytostatic; tumour; gene; ss.
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                                                                                                                                                                                                                                                                                                                                                                            Claim 1; SEQ ID NO 3000; 300pp + Sequence Listing; English
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                    12-JUL-2001; 2001US-0305484P.
20-AUG-2001; 2001US-0313999P.
27-NOV-2001; 2001US-0333626P.
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09-FEB-2001; 2001US-0267568P.
21-MAR-2001; 2001US-0278651P.
28-APR-2001; 2001US-0291112P.
16-MAY-2001; 2001US-0291631P.
2001US-0291631P
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                                                                                                                        (CORI-) CORIXA CORP.
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les 18; Conserva
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  The invention relates to an isolated polynucleotide (I) comprising: (a) any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b) complements of (a), (d) sequences consisting of at least 20 contiguous residues of (a), (d) sequences that hybridize to (a), under moderately stringent conditions; (e) sequences having at least 75% or 90% identity to (a), or (f) degenerate variants of (d). Polypeptides (ABP68596-ABP68637) encoded by (I) and oligonucleotide can be used to detect cancer in a patient and compositions comprising polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations and antigen presenting cells expressing the polypeptide are useful in treating pancreatic cancer and stimulating an immune response. The polynucleotides can be used as probes or primers for nucleic acid hybridisation, in the design and proteins in the tumour cells, in vaccines and for gene therapy. Note: The sequence data for inhibiting expression of the tumour cells, in vaccines and for gene therapy. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at fip.wipo.int/pub/published_pot_sequences
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                                                                                                                                                                                                                                                                                                   New isolated polynucleotide and pancreatic tumor polypeptides, useful for
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                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 4030; 300pp + Sequence Listing; English.
                                                                                                                                                                                                    Persing DH, Hepler WT,
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31-JAN-2001; 2001US-0265682P.
09-FEB-2001; 2001US-0267868P.
21-MAR-2001; 2001US-0285112P.
                       16-MAY-2001; 2001US-0291631P.
12-JUL-2001; 2001US-0305464P.
20-AUG-2001; 2001US-031399P.
27-NOV-2001; 2001US-0333626P.
2001US-0287112P
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                                                                                                                                                (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                 WPI; 2002-627435/67.
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                                                                                                                                                                                                  DR,
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ABV97592
IID ABV9
IID ABV9
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PP 30 - ...
PP 31 - ...
PP 28 - ...
PP 29 - ...
PP 20 - ...
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The invention relates to an isolated polynucleotide (I) comprising: (a) any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b) complements of (a); (c) sequences consisting of at least 20 contiguous residues of (a); (d) sequences that hybridize to (a), under moderately stringent conditions; (e) sequences having at least 75% or 90% identity (c) (a); or (f) degenerate variants of (a). Polypeptides (ABP68596-ABP68637) encoded by (I) and oligonucleotide can be used to detect cancer in a patient and compositions comprising polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations and antigen presenting antimulating an immune response. The polynucleotides can be used as probes or primers for nucleic acid hybridisation, in the design and properties of the tumour polynomials of the tumour coll controls and profesing in the timour coll controls and profesing in the timour coll coll controls and profesing in the timour coll coll controls and profesing in the timour coll coll controls of the tumour coll controls and profesing in the timour coll controls and profesing controls controls and controls 
                                                                                                                                                                                                                                                                 New isolated polynucleotide and pancreatic tumor polypeptides, useful for diagnosing, preventing and/or treating cancer, particularly pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides and proteins in the tumour cells, in vaccines and for gene therapy. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                           Jiang Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Slonim DK;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytostatic; gene therapy; expression profile; solid tumour; peripheral blood mononuclear cell; PBMC; prognosis; ds.
                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 3604; 300pp + Sequence Listing; English.
                                                                                                                                                           Hepler WT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 224 BP; 68 A; 68 C; 37 G; 51 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Twine NC,
                                                                                                                                                           Persing DH,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Solid tumour prognosis gene segid 3346.
                                                                                                                                                           Lodes MJ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADU12907 standard; DNA; 418 BP
12-JUL-2001; 2001US-0305484P.
                   20-AUG-2001; 2001US-0313999P.
27-NOV-2001; 2001US-0333626P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-APR-2004; 2004WO-US013587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-APR-2003; 2003US-0466067P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-JAN-2004; 2004US-0538246P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-JAN-2005 (first entry)
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                                                                                                                                                           Kalos MD,
                                                                                                                                                                                                                 WPI; 2002-627435/67.
                                                                                                      (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
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(STRA/) STRAHS A.
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                                                                                                                                                           Benson DR,
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The invention describes a method comprising comparing an expression profile of at least one gene in a peripheral blood sample of a patient to at least one reference expression profile of the at least one gene, where the patient has a solid tumour, and each of the gene is differentially expressed in peripheral blood mononclear cells (PBMCs) of a first class of patients as compared to PBMCs of a second class of patients, where controlly the first and second classes of patients have the solid tumour, and subcluster formed by an anispervised clustering analysis of gene expression profiles in PBMCs of a population of patients who have the solid tumour, and where the majority of the first class of patients has a first clinical outcome, and the majority of the second class of patients has a second clinical cutcome. Also described are a system comprising (i) a memory or a storage medium including data that represent an expression profile of at class one gene in a peripheral blood sample of a patient who has a solid tumour, (ii) at least another storage medium including data that represent an expression profile of the gene, (iii) a storage medium including data that represent an expression profile of the gene, (iii) a program capable of comparing the expression profile of the reference expression profile of the reference correcting the expression profile of the reference correcting the expression profile, and (iv) a processor capable of executing the corporation profile, and (iv) a processor capable of executing the comparising concentrated probes for solid tumour prognosis genes is differentially expressed in capacitic and outcomes of the patients, and a nucleic acid or protein array comprising concentrated probes for solid tumour prognosis genes is differentially expressed in the prince, where both the first and second classes of patients has a first claim of patients, where the first class of patients has a second classe of patient, and where the first and second classes of patients, where corporation, but was obtain ö Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative; ss. A method, useful for prognosing and treating solid tumor, comprises comparing an expression profile of a gene expressed in peripheral blood mononuclear cells to a reference expression profile of a gene. Gaps Human pancreatic cancer antigen nucleotide sequence SEQ ID NO:414. ö directly from WIPO at ftp.wipo.int/pub/published_pct_sequences. 100.0%; Score 18; DB 13; Length 418; 100.0%; Pred. No. 14; tive 0; Mismatches 0; Indels (Sequence 418 BP; 105 A; 125 C; 104 G; 84 T; 0 U; 0 Other; Disclosure; Page; 111pp; English. AAC99186 standard; cDNA; 445 BP 275 ccacaccrarrcaracrc 292 1 CCACACCTATTCATACTC 18 (first entry) Local Similarity 100. es 18; Conservative WPI; 2004-804779/79 Immerman F, 09-MAR-2001 AAC99186; Query Match Matches RESULT 10 AAC99186 В

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Key
    PAC98773 to AAC99231 encode the human pancreatic cancer associated proteins, called pancreatic cancer antigens, given in AAB54008 to Proteins, called pancreatic cancer antigens have cytostatic, cancer antigens can be used for gene therapy. The polymucleotide and proteins can be used for preventing, treating, or ameliorating a medical condition or in assays for diagnosing a pathological condition or a susceptibility to one in a proteins can be identified. The pancreatic cancer antigens can be used to cated to protein can be identified. The pancreatic disorders, especially cancer. Agonists and antagonists to the antigens can be used to design nucleic and diagnostic methods that can be used to design nucleic and diagnostic methods. The proteins can be used to design nucleic and diagnostic methods. The proteins can be used to generate antibodies which are used to purify, detect and target the polypeptides, including both in vivo and in vitro diagnostic and therapeutic methods. The proteins can be used to generate antibodies both in vivo and in vitro diagnostic and therapeutic methods. The proteins can be used to generate antibodies proteins can be used to treat or prevent neural, immune system, muscular, proteins can be used to treat or prevent neural, immune system, muscular,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proteins can be used to treat or prevent neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal or proliferative disorders. AAC99212 to AAC99240 and AAB54467 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human, 88, gene, SNP, single nucleotide polymorphism; pancreatitis,
pancreatic cancer, Phospholipase A2 groupIB; PLA2GIB; gene therapy,
haplotype, genotype, chromosome 12q23-q24.1; transgenic, drug screening.
                                                                                                                                                                                                                                                                                                                                                                New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 445 BP; 111 A; 135 C; 94 G; 96 T; 0 U; 9 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human Phospholipase A2, groupIB (PLA2G1B) cDNA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 848; 1379pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282 CCACACCTATTCATACTC 299
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                                                                                                                                                                      99US-0124270P.
                                                                                                                           08-MAR-2000; 2000WO-US005989
                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JUN-2002 (first entry)
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                           Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                   WPI; 2000-579444/54.
                                                                                                                                                                                                                                                                                                                          P-PSDB; AAB54421
                                        WO200055320-A1
Homo sapiens.
                                                                                                                                                                      12-MAR-1999;
                                                                                     21-SEP-2000
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The invention relates to an isolated human Phospholipase A2, Group IB (pancreas) (PLA2G1B) polynucleotide comprising a sequence which is a CD polymorphic variant for a reference sequence for the PLA2G1B gene or its fragment, or a polymorphic variant of a reference sequence for a PLA2G1B condition of the place of an individual, predicting the haplotyping the PLA2G1B gene of an individual, identifying an association between a trait and at least one haplotype pair of the PLA2G1B gene, an isolated genotyping oligomuclectide for detecting a polymorphism in the PLA2G1B gene, a recombinant non-human organism transformed or transfected with the PLA2G1B sequence, where the organism expresses a PLA2G1B protein concoded by the first nucleotide sequence or by the polymorphic variant of a reference sequence for the PLA2G1B protein or sequence, an isolated polypeptide comprising a sequence which is a copymorphic variant of a reference sequence for the PLA2G1B protein or its fragment, an anti-PLA2G1B monoclonal antibody, screening for drugs targeting PLA2G1B, a computer system for soring and analysing crasping PLA2G1B variant is useful in studying the expression and function of PLA2G1B variant is useful in studying the expression and curvity (e.g. pancreatitis and pancreatic cancer) and for therapeutic curvings. Transgents of pancreatitis and pancreatic cancer) and for therapeutic curvings to transgents of the PLA2G1B sogenes in vivo, for in vivo screening and testing of drugs targeted against PLA2G1B protein, and for testing the efficacy of the PLA2G1B isogenes in vivo, for in vivo screening and testing of drugs custivity of PLA2G1B as well as on the binding affinity of candidate drugs correction on the binding affinity of cardidate drugs correction on the binding affinity of playag11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel isolated human Phospholipase A2, Group IB pancreas polynucleotide, for therapeutic purposes, for studying expression and function of the polynucleotide and for expressing the phospholipase protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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replace(365,A)
                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Single nucleotide polymorphism"
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Jocation/Qualifiers
                                                                                                        "Pla2G1B"
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                                                                                                                                               replace (294, A)
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label= SNP
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/label= SNP
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Matches 18; Conservative
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Homo sapiens.

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Seilhamer JJ, Watson GA;

99US-0163508P.

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02-NOV-2000; 2000WO-US030396.
                                                                                                                      (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                WPI; 2001-291057/30
                               WO200132927-A2
                                                                                                04-NOV-1999;
           Homo sapiens
                                                                                                                                            Sornasse T,
                                                     10-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA35100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes involved in psychoneuroendocrinimmune (PNI) activity. The microarray is useful in diagnosing a condition associated with PNI activity, such as CFS, type-2 diabetes, allergic condition, inflammation, cancer and infection. The present sequence represents a psychoneuroendocrinimmune gene expressed sequence tag. Note the specificatio mentions SEQ ID NO of up to 3314 but only sequences up to SEQ ID NO 1829 are provided.
                                                                                                                                                                                                                                                                                                                                                           New microarray comprising probes for genes involved in psychoneuroendocrinimmune (PNI) activity, useful in diagnosing a condition associated with PNI activity, e.g., inflammatory or infectious
                                                                                                                               microarray; psychoneuroendocrinimmune; chronic fatigue;
non-insulin dependent diabetes; allergy; immune disorder; inflammation;
cancer; neoplasm; infection; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; tissue specific; diagnosis; brain; heart; skeletal muscle; lung; liver; uterus; ovary; stomach; intestine; kidney; pancreas; ss; metabolic disease; developmental disease; cytostatic; immunomodulatory; neuroprotective; gene therapy; cancer; immunopathology; neuropathology;
                                                                                                            Human psychoneuroendocrinimmune expressed sequence tag SEQ ID NO 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a new microarray which comprises probes for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 18; DB 14; Length 447; 100.0%; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 447 BP; 116 A; 128 C; 112 G; 91 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human pancreas specific cDNA sequence SEQ ID NO:164.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 1082; 254pp; English.
                                                                                                                                                                                                                                                                                          (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAH57324 standard; cDNA; 496 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276 CCACCTATTCATACTC 293
                                            ADV43454 standard; cDNA; 447 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                04-JUN-2004; 2004WO-US017686
                                                                                                                                                                                                                                                                     04-JUN-2003; 2003US-0475915P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-SEP-2001 (first entry)
                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                 Vernon SD;
                                                                                                                                                                                                                                                                                                                                       WPI; 2005-031682/03
                                                                                                                                                                                                     WO2004108899-A2
                                                                                        10-MAR-2005
                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                 Nicholson A,
                                                                                                                                                                                                                           16-DEC-2004.
                                                                  ADV43454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAH57324;
                                                                                                                                                                                                                                                                                                                                                                                               diseases
                      RESULT 13
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AAH57161 to AAH57576 represent cell and tissue specific polynucleotide
sequences (I). (I) can have cytostatic, immunomodulatory and
cequences (I). (I) can have cytostatic, immunomodulatory and
cervice protective activities, and can be used in gene therapy. (I) and
control of the manage of the ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    phosphorothioate, impaired respiration, inflammation; allergy, allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiaschmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
New cell and tissue specific polynuclectides useful for diagnosis, prognosis or monitoring of treatments for disorders where the gene is associated with a cancer, immunopathology or neuropathology.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine receptor related polynucleotide SEQ ID NO:2789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 496 BP; 102 A; 120 C; 142 G; 127 T; 0 U; 5 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 14;
0; Mismatches
                                                                                                                                                                                                                                                       Claim 1; Page 126; 327pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      209 CCACACCTATTCATACTC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВР
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
es 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200009525-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA35100;
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The present interaction describes a new composition composition concluded (00) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or antiasthmatic. The ON can have antiinflammatory, antiallergic.

Inflammation. The ON can have antiinflammatory, antiallergic.

antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary cffects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic impeded respiration, respiratory distress syndrome, pain, cystic cifbrosis, pulmonary disease (COPD) and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may mecastasise to the lungs, including one reduces side effects. The A-containing ONS break down with the crease of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA12131 to AAA3512 represent the invention, which correspond to SEQ ID No:1 to 2815, and then the present invention, which correspond to SEQ ID No:1 to 185, but the sequences differ the managed sequences. SEQ ID No:1 to 185, but the sequences of firm the previously managed sequences. SEQ ID No:1 to 185, but the sequences of firm the previously managed sequences. SEQ ID No:1 to 185, but the sequences of firm the previously managed sequences. SEQ ID No:1 to 185, but the sequences of firm the advances are also called SEQ ID No:1 to 185, but the sequences of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a new composition comprising an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; alraway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory, bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131992) are specifically claimed ONs from the present invention. N.B. Juences given in the disclosure of the present invention do not match with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                               New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 1056; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     313 CCACACCTATTCATACTC 330
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                                                       99WO-US017712.
                                                                                                           98US-0095212P.
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Matches 18; Conservative (
                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA.
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                                                                                                                                                                                                                                                                           WPI; 2000-205971/18.
                                                       03-AUG-1999;
                                                                                                           03-AUG-1998;
24-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                         Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                         cancers.
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The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) can have respiratory, bronchodiator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cytostating peptide factors and malignancies, such as stimulating and cortivating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokine receptors, adenosine receptors, cytokines and chemokine receptors, adenosine receptors, cytokine and chemokine receptors, adenosine receptors, cytokine and creceptors, and peripheral nervous and non-nervous system cortivations and peripheral nervous and non-nervous system creceptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(iee) and/or condition and from mulmonary was observed in this marking or surfactors was consected with a disease or condition and and an analogue or including respiratory obstruction (especially pulmonary obstruction which are associated with a disease or condition and and an analogue or including respiratory obstruction (especial with a disease or condition and and an analogue or including respiratory obstruction (especial with a disease or condition and and an analogue or including respiratory obstruction without an analogue or including respiratory obstruction without and with an analogue or including respiratory obstruction in disparse or including respiratory obstruction and or including respiratory or and or a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
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pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 1135; 1592pp; English.
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                                                                                                                                                                                                                                                                                                                            06-APR-1999; 99US-0127958P.
                                                                                                                                                                                                                                                                         24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and respiratory obstructions
                                                                                                                                                                                                                                                                                                                                                                               UYEC-) UNIV EAST CAROLINA
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nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                               (NYCE/) NYCE J W.
                                                                                                                                                               WO200062736-A2.
                                                                                                               Homo sapiens.
                                                                                                                                                                                                                  26-OCT-2000,
                                                         cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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ABL64906 standard; DNA; 562 BP

ABL64906 ID ABI XX AC ABI

ABL64906;

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The present invention describes a method (M1) for screening for an antineoplastic agent. The method involves exposing cells to a chemical agent neoplastic agent. The method involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, determining a change in expression of at least one gene (1) of a signature gene set, where (1) comprises a sequence (5) selected from 847 sequences (given in ABL61664 or ABL70110), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity. (I) has cytostatic activity and can be used in gene therapy. M1 can be used for screening an anti-neoplastic agent, and can be used for producing a product which is converted of the agent. M1 can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarcinoma, carcinoma, clear cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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                                                                                                                                                                                                                                                      Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other;
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27-SEP-2000; 2000US-0235840P
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nes 18; Conservative
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22-SEP-2000;
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20-SEP-2000;
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                                                               Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
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                                        Lung cancer related gene sequence SEQ ID NO:3243
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22-SEP-2000; 2000US-0234509P.
25-SEP-2000; 2000US-0234924P.
25-SEP-2000; 2000US-0234924P.
25-SEP-2000; 2000US-0234924P.
25-SEP-2000; 2000US-023504P.
25-SEP-2000; 2000US-023504P.
25-SEP-2000; 2000US-0235134P.
26-SEP-2000; 2000US-0235134P.
27-SEP-2000; 2000US-0235134P.
27-SEP-2000; 2000US-0235619P.
27-SEP-2000; 2000US-023561P.
27-SEP-2000; 2000US-023561P.
28-SEP-2000; 2000US-023561P.
28-SEP-2000; 2000US-023561P.
28-SEP-2000; 2000US-023561P.
28-SEP-2000; 2000US-023561P.
28-SEP-2000; 2000US-0236031P.
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18-SEP-2000; 2000US-0233133P
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              15-MAY-2002 (first entry)
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Soppet DR, Weaver Z;
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Claim 1; SEQ ID NO 3243; 44pp; English

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6; Length 562;

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Screening for anti-neoplastic agent involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, and determining a change in expression of a gene of a signature gene set.
                        Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
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 cancer related gene sequence SEQ ID NO:4252
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Soppet DR,
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  Fund
 The present invention describes a method (M1) for screening for an antinoplastic agent. The method involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, determining a change in expression of at least one gene (I) of a signature gene set, where (I) comprises a sequence (S) selected from 8447 sequences (given in ABL61664 to ABL70110), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity. (I) has cytostatic activity and can be used in the rappy. M1 can be used for screening an anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as a result of M1, and the data is sufficient to convey the chemical structure and/or properties of the agent. M1 can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarcinoma, carcinoma, clear cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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        28-SEP-2000; 2000US-0236032B.
28-SEP-2000; 2000US-0236032B.
28-SEP-2000; 2000US-0236031B.
28-SEP-2000; 2000US-0236031B.
28-SEP-2000; 2000US-023611B.
29-SEP-2000; 2000US-0236111B.
29-SEP-2000; 2000US-0236111B.
29-SEP-2000; 2000US-0236111B.
29-SEP-2000; 2000US-0236111B.
29-SEP-2000; 2000US-0237173B.
02-OCT-2000; 2000US-0237278B.
02-OCT-2000; 2000US-0237278B.
03-OCT-2000; 2000US-023726B.
03-OCT-2000; 2000US-0237316B.
03-OCT-2000; 2000US-0237316B.
03-OCT-2000; 2000US-0237316B.
03-OCT-2000; 2000US-0237604B.
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nes 18; Conservative
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Soppet DR,
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to be tested for anti-neoplastic activity, determining a change in comprises a sequence (S) selected from 8447 sequences (given in ABL61664 to ABL70110), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity. (I) has cytostatic activity and can be used in gene therapy. MI can be used for screening an anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as a result of MI, and the data is sufficient to convey the chemical structure and/or properties of the agent. MI can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarcinoma, calar, call cancer, infiltrating ductal cancer, infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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100.0%; Score 18; DB 6; Length 562; llarity 100.0%; Pred. No. 15; Conservative 0; Mismatches 0; Indels Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other; 18 1 CCACACCTATTCATACTC Local Similarity les 18; Conser Query Match Matches

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AB296916 standard; DNA; 562 (first entry) 17-0CT-2003 ABZ96916; RESULT 19 ABZ969:

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antinflammatory steroid, ubiquinone, antinflammatory; antiallergic, antianthmatic; hypotensive, immunosuppressive; cytostatic; gene therapy; antiense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Human; antisense; lung dysfunction; nasal airway dysfunction; Human nucleic acid sequence. Homo sapiens

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC

Katz E, Pabalan J, s; Li Y, Sandrasagra A, Tang L, Shahabuddin Nyce JW, I Miller S,

Aguilar

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone.

Disclosure; SEQ ID NO 12158; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or

ö nasal airway dysfunction and a second active agent comprising an antinfilammatory steroid and ubiquinone. A composition of the invention has antinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodiation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO Gaps .. 0 100.0%; Score 18; DB 10; Length 562; 100.0%; Pred. No. 15; 0; Indels C ive 0; Mismatches 0; Indels C Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other; at ftp.wipo.int/pub/published_pct_sequences 313 CCACACCTATTCATACTC 330 1 CCACACCTATTCATACTC 18 Local Similarity 100. nes 18; Conservative Query Match RESULT 20 g ઠે

ADI31874 standard; cDNA; 562 BP ADI31874; ADI31874

(first entry) Human cDNA #1200 17-JUN-2004

Human; gene; 88; immunological response; immunopathological condition; Crohn's disease; asthma; ulcerative colitis; hypereosinophilis; irritable bowel syndrome; osteoarthritis; rheumatoid arthritis; acute monocytic leukaemia; antiinflammatory; antiasthmatic; antiulcer; osteopathic; antiarthritic; antirheumatic; cytostatic.

Homo sapiens

US6607879-B1

98US-00023655. 09-FEB-1998; 19-AUG-2003.

98US-00023655 09-FEB-1998;

(INCY-) INCYTE CORP.

Seilhamer Stuart SG, Cocks BG,

3

WPI; 2003-895307/82

A composition comprising a plurality of cDNAs, useful for detecting altered expression of genes in an immunological response or for diagnosing and treating an immunopathology, e.g. Crohn's disease, asthma or osteoarthritis.

Claim 1; SEQ ID NO 1200; 50pp; English.

The invention relates to a composition comprising a plurality of cDNAs for detecting the altered expression of genes in an immunological response. The invention also relates to a method of diagnosing or monitoring the treatment of an immunopathological condition in a sample, comprising obtaining nucleic acids from a sample, contacting the nucleic acids of the sample with an array comprising the plurality of cDNAs under conditions to form one or more hybridisation complexes, detecting the

Claim 15; SEQ ID NO 12158; 763pp; English.

hybridisation complexes and comparing the levels of the detected hybridisation complexes with the level of hybridisation complexes detected in a non-diseased sample, where an altered level of the detected in a non-diseased sample, where an altered level of the detected of an ann-diseased sample, where an altered level of the detected of an immunopathological condition. Also disclosed are an expression profile comprising a microarray and a plurality of detectable complexes and a method for identifying a plurality of polynuclectide probes. The cDNAs are useful as hybridisable array elements in a microarray for monitoring the expression of target polynuclectides. The microarray for monitoring the expression of target polynuclectides. The microarray can be used in the expression of the diseases. The microarray may ulcerative colitis, hypereosinoplia, irritable bowel syndrome, osteoarthritis, rheumatoid arthritis or acute monocytic leukaemia, and in dentifying agents for the treatment of the diseases. The microarray may also be used in drug discovery and development, toxicological and carcinogenicity studies, forensics or pharmacogenomics. The composition may also be used in purification of a subpopulation of mRNAs, cDNAs or genomic fragments. This sequence represents a human cDNA of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly USPTO at segdata.uspto.gov/seguence.html. from \$

Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other;

Gaps .; 0 100.0%; Score 18; DB 11; Length 562; 100.0%; Pred. No. 15; 0; Indels Mismatches ö 18; Conservative Query Match Best Local Similarity Matches

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ABD20765 standard; DNA; 562 ABD20765; RESULT 21 ABD20765

29-JUL-2004 (first entry)

Human pulmonary and inflammatory target DNA #376.

respiratory tract inflammation, adenosine sensitivity, lung, cancer; surfactant depletion, antiallergic, antiinflammatory, antiasthmatic; analgesic, hypotensive, immunosuppressive, cytostatic, cystic fibrosis, beta-adrenergic agonist, respiratory disease, pulmonary vasconstriction, respiratory disease, pulmonary vasconstriction, emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; pulmonary transplantation rejection; ds

Homo sapiens

WO200285309-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

(EPIG-) EPIGENESIS PHARM INC.

Katz E, Pabalan J, Aguilar D; ŝ Li Y, Sandrasagra A, Tang L, Shahabuddin Miller S, 3 Nyce

WPI; 2003-093058/08.

ţ oligonucleotide containing less percentage of adenosine, targeted t nucleic acids associated with lung airway or lung dysfunction, and Pharmaceutical composition for treating asthma, has antisense bronchodilating agent

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoonstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The collygonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung arway or lung expression or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or creating a respiratory, lung or malignant disease. The administered conversing a respiratory, lung or malignant disease. The administered conversing a respiratory, use or malignant disease. The administered conversing a respiratory, and/or bronchoconstriction and/or lung pulmonary obstruction, and/or bronchoconstriction and/or bronchoconstriction are associated with a disease or condition such as pulmonary vasoconstriction, allergies and/or bronchoconstriction, respiratory disease, pulmonary contrains a subma, cystic fibrosis, allergie thin thints, pulmonary contrains and activity in the pulmonary disease, pulmonary contrains a subma, cystic fibrosis, allergies and charactions between the pulmonary contrains and co ö igonucleotides into products that free adenosine into the system lung, brain, heart, kidney, etc, tissue environment and thereby, to transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system Gaps ö 100.0%; Score 18; DB 11; Length 562; 100.0%; Pred. No. 15; Sequence 562 BP; 147 A; 163 C; 125 G; 127 T; 0 U; 0 Other; 0; Indels Mismatches prevent any unwanted effects due to it . 0 1 CCACACCTATTCATACTC 18 18; Conservative Local Similarity Query Match Matches ò

313 CCACACCTATTCATACTC 330

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ADS83941 standard; cDNA; 562 11-AUG-2005 (first entry) ADS83941; 22 RESULT 2 ADS83941

Human lymph node cDNA #1200.

BB

ss; gene; human; immunological response; blood cell; cancer; immunopathological, AIDS; allergy; anaemia; asthma; atherosclerosis; bronchitis; ulcerative colitis; diabetes; multiple sclerosis; osteoporosis; pancreatitis; infection; arthritis; lymph node.

Homo sapiens.

US2004077003-A1.

22-APR-2004.

14-AUG-2003; 2003US-00641643.

09-FEB-1998;

(INCY-) INCYTE CORP.

Seilhamer JJ; Stuart SG, Cocks BG,

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RESULT 24
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                                                                                                          detect genes differentially expressed in an immunological response, abundantly expressed in an immunological response and/or coding for a bundantly expressed in an immunological response and/or coding for a polypeptide known to regulate blood cell biology. The polynucleotides are useful in research and diagnostic applications particularly in cancer and immunopathological conditions, such as AIDS, allergies, anaemia, asthma, atheroscierosis, bronchitis, ulcerative colitis, diabetes, multiple sclerosis, broncreatitis, infections and arthritis. The present sequence represents a human lymph node cDNA used to detect blood sequence does not appear in the printed specification but was obtained in electronic format from the USPTO web site
                   New compositions having a number of first, second and third polynucleotide probes, useful in research and diagnostic applications in cancer and immunological conditions e.g. AIDS, diabetes, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Detecting of high-grade dysplasia in cells of a mammalian tissue sample
                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                 The invention relates to polynucleotides which are used as probes to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neo-plastic transformation; cancer; cytostatic; gene therapy; human; phospholipase a2 precursor; PA21; chromosome 12; gene; ss.
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/product= "phospholipase a2 precursor (PA21)"
/transl_except= (pos:172. .177,aa.Tyr)
/transl_except= (pos:343. .348,aa:11e)
                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 13; Length 562; 100.0%; Pred. No. 15;
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                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              high-grade dysplasia; HGD; oesophageal adenocarcinoma;
                                                                                                                                                                                                                                   (segdata.uspto.gov/sequence.html?DocID=20040077003).
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                                                                                                                                                                                                                                                                                                      Mismatches
                                                                            Claim 15; SEQ ID NO 1200; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human PA21 encoding cDNA SEQ ID NO:27.
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es 18; Conservative
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WPI; 2004-387937/36
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Matches
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                                                                                                                                                                                       The present invention describes a method for detecting high-grade dysplasia (HGD) in cells of a mammalian tissue sample. Also described: (1) identifying an osophageal tissue susceptible to osophageal adenocarcinoma; (2) determining the predisposition of a mammalian tissue to a neo-plastic transformation by detecting HGD in cells of the tissue; and (3) detecting acancer in a patient. The method can be used in detecting HGD and cancer in cells of a mammalian tissue sample. The methods and compositions of the present invention can be used in treating and preventing HGD and cancer, and in gene therapy. The present sequence encodes human phospholipase a2 precursor (PA2I), which is used in the exemplification of the present invention. The human PA2I gene is located
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forenaic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative; ss.
comprises establishing the level of expression in the test tissue sample
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC98773 to AAC99231 encode the human pancreatic cancer associated proteins, called pancreatic cancer antigens, given in AAB54008 to AAB54466. The human pancreatic cancer antigens have cytostatic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human pancreatic cancer antigen nucleotide sequence SEQ ID NO:52.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 585 BP; 167 A; 166 C; 125 G; 127 T; 0 U; 0 Other;
                                                                                                                        Claim 1; SEQ ID NO 27; 256pp; English
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Matches 18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on chromosome 12.
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                                             of the genes.
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Page 15

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The Burdochecture, incollabor, continuous of the continuous continuous continuous continuous continuous continuous continuous can be used for in gene therapy. The polynucleotide and proteins can be used for preventing, treating, or ameliorating a medical condition or in assays continuous can diagnosing a pathological condition or a susceptibility to one in a subject. Binding partners to the proteins and the activity of the proteins can be identified. The pancreatic cancer antigens can be used to detect, treat or prevent pancreatic disorders, especially cancer.

Agonists and antagonists to the antigens can be used to design nucleic cand partners antigens can be used in chromosome mapping, linkage and hybridisation probes that can be used in chromosome mapping, linkage analysis, tissue identification and/or typing and a variety of forensic and diagnostic methods. The proteins can be used to generate antibodies which are used to purify, detect and target the polypeptides, including continuous and in vitro diagnostic and therapeutic methods. The proteins can be used to treat or prevent neural, immune system, muscular, reproductive, gastrointestinal pulmonary, cardiovascular, renal or proliferative disorders. Acceptance of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequences used in the exemplification of the present invention
   neuroprotective, nootropic, immunomodulatory,
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Sequence 630 BP; 205 A; 162 C; 136 G; 123 T; 0 U; 4 Other;

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100.0%; Score 18; DB 3; Length 630; 100.0%; Pred. No. 15;
                                0; Indels
                               0; Mismatches
                                                                                           302 ccacaccrarrcaracrc 319
                                                              1 CCACACCTATTCATACTC 18
                               18; Conservative
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 Query Match
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Gaps

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Human normal pancreas tissue derived cDNA 6. AAZ41391 standard; cDNA; 644 19-JAN-2000 (first entry) AAZ41391;

Η.

Human; pancreas; cancer; treatment; anticancer; cytostatic; gene therapy; EST; expressed sequence tag; ss. 98DE-01018598 98DE-01018598 DE19818598-A1 Homo sapiens 19-APR-1998; 19-APR-1998; 21-OCT-1999.

(META-) METAGEN GES GENOMFORSCHUNG MBH.

Pilarsky C, Rosenthal A, Specht T, Hinzmann B, Schmitt A,

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Dahl

WPI; 1999-592039/51.

New nucleic acid sequences expressed in normal pancreatic tissues, and derived polypeptides, for treatment of pancreatic cancer and identification of therapeutic agents.

Claim 3; Page 50; 92pp; German.

expressed in normal human pancreatic tissue and which have anticancer and cytostatic activity. (A) are used (i) for recombinant expression of polypeptides (B) and (ii) to isolate complete genes. (B) are used (i) to identify agents suitable for treatment of pancreatic cancer; (ii) directly for treating this form of cancer (including expression from therapy vectors) and (iii) for generation of specific antibodies. (A) are This invention describes novel cDNA sequences (A) that are highly

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequences (1). (I) can have cytostatic, immunomodulatory and neuroprotective activities, and can be used in gene therapy. (I) and proteins (II) encoded by then are used in plus throughput screening assays to select DNA molecules, RNA molecules, peptide nucleic acids, mimetics, immunoglobulins, agonists, antagonists, antibodises or their fragments, immunoglobulins, inhibitors, drug compounds and pharmaceutical agents. Expression of (I) in a sample indicates the differentiation of embryonic stem cells into a tissue selected from brain, heart, kidney, liver, lung, skeletal muscle or pancreatic tissues. (I) and (II) are used to produce an expression profile that defines a metabolic or developmental process, treatment, condition, disease or disorder. The gene profile can be used for disgnossis, prognosis or monitoring of treatments and for investigating a predisposition to a disorder where the gene is associated with a cancer, immunopathology or neuropathology
               tissue type before comparison of expression patterns. This allows a significantly longer fragment of the gene to be revealed, so should reduce the number of failures associated with the fact that ESTB from different libraries may represent different parts of the same unknown gene, distorting the estimated frequency of occurrence in a particular tissue. AAZ41386-Z41423 represent human normal pancreatic tissue derived CDNA fragments which encode the protein fragments represented in AAV59893
assembling ESTs (expressed sequence tags) from a particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; tissue specific; diagnosis; brain; heart; skeletal muscle; lung; livez; uterus; ovary; stomach; intestine; kidney; pancreas; ss; metabolic disease; developmental disease; cytostatic; immunomodulatory; neuroprotective; gene therapy; cancer; immunopathology; neuropathology.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAH57161 to AAH57576 represent cell and tissue specific polynucleotide
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                                                                                                                                                                                                                                                       Length 644;
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100.0%; Pred. No. 15;
ive 0; Mismatches 0
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Matches 18; Conservative
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Gaps

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0; Indels

Mismatches Score 18; Pred. No.

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100.0%;

Query Match 100. Best Local Similarity 100. Matches 18; Conservative

483 ccacaccrarrcaracrc 500

ð 셤 ACN42348 standard; cDNA; 742 BP

ACN42348

ACN42348;

Length 654;

5.

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The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PGR) primers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal cartivity of (II) or to traat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food stees expressing (II) if (II) and (II) are useful in medical imaging of sites expressing (II) il) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity
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                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                             Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
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                                100.0%; Score 18; DB 4; Length 654; 100.0%; Pred. No. 15;
BP; 165 A; 193 C; 145 G; 143 T; 0 U; 8 Other;
                                                                   Indels
                                                                                                                                                                                                                                                                                                                         DNA encoding novel human diagnostic protein #11903.
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                                            100.0%; Prec. ...
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                                                                                                                         428 CCACACCTATTCATACTC 445
                                                                                                                                                                                                                       AAS76099 standard; cDNA; 654 BP
                                                                                                     1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-2000; 2000US-00540217
23-AUG-2000; 2000US-00649167
                                                                                                                                                                                                                                                                                         (first entry)
                                                                   18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drmanac RT, Liu C,
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                                                3est Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P-PSDB; ABG11912
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Sequence 654
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                                                                                                                                                                                                                                                         AAS76099
                                   Query Match
                                                                   Matches
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The invention relates to novel diagnostic and therapeutic polynucleotides selected from one of the 2722 sequences defined in the specification. A selected from one of the 2722 sequences defined in the specification. A diagnostic and therapeutic polynucleotides (dithp) or polypeptides may be used to diagnost a particular condition, disease or disorder associated with human molecules, e.g. cell proliferative disorders, endocrine disorder, neurological disorders, developmental disorders, endocrine disorder, neurological disorders, gastrointestinal disorders, or infections caused by virus, bacteria, fungi or parasite. The dithp collections also be used in genetic mapping, in identifying individuals from minute biological samples in detecting single nucleotide polymorphisms, as molecular weight markers, and for somatic or germline polymorphisms, are sequence represents a dithp polymorleotide of the invention. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO at www.wipo.int/pct/en/sequences/listing.htm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gietzen D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New diagnostic and therapeutic polynucleotides and polypeptides, useful in diagnosing a condition, disease or disorder associated with human molecules, e.g. autoimmune or inflammatory disorders, in gene therapy or in gene mapping.
                                                                                                                                 ss; gene; gene therapy; human diagnostic and therapeutic polynucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Harthshorne TA, Suchorolki MT, Altus CM, Pitts SJ, Elder LV; Mooney EM, Delegeane AM, Pancear IS, Banville SC, Reddy TP; Stevens KA, Blanchard JL, Panzer SR, Wang X, Au AP, Gerstin EH; Peralta CH, Anderson SB, Rioux P, Shen EJ, Wu MC, Stuve LL; Lagace RE, Spiro PA, Stewart EA, Wingrove J, Vitt UA, Kirton ES; Ru Y, Kwong M, Policky JL, Hurwitz BL, Ma Y, Jackson JL, Gietze Patury S, Shi X, Suarez CJ;
                                                                                          Human diagnostic and therapeutic polynucleotide SEQ ID NO:1223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shen F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 742 BP; 182 A; 204 C; 191 G; 165 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Marjanovic MM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wright RJ, Bruns CM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page; 190pp; English.
                                                                                                                                                                                                                                                                                                                          .2-SEP-2003; 2003WO-US028227.
                                                                                                                                                                                                                                                                                                                                                                   12-SEP-2002; 2002US-0410259P.
12-SEP-2002; 2002US-0410260P.
                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                 (INCY-) INCYTE CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004-329368/30.
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                                                                                                                                                                                                                                              WO2004023973-A2.
                                                                                                                                                                                                        Homo sapiens.
                                                          18-NOV-2004
                                                                                                                                                                                                                                                                                       25-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schmidt JP,
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and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invantion. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at the wipo.int/pub/published_pct_sequences

Sequence 654 BP; 190 A; 174 C; 170 G; 120 T; 0 U; 0 Other;

AAA31992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence

Sequence 3375 BP; 837 A; 866 C; 764 G; 908 T; 0 U; 0 Other;

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Gaps

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0; Indels

Mismatches

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18; Conservative

Matches

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Local Similarity

Query Match

listing

8886666

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3304 CCACACCTATTCATACTC 3321

1 CCACACCTATTCATACTC 18

Length 3375;

100.0%; Score 18; DB 3; 100.0%; Pred. No. 17;

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The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets conclision acids involved in bronchoconstriction, allergies, and/or antisine involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, compositation, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive culmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including createness and prostate cancer. The reduction of the adenosine content of the CONs reduces side effects. The A-containing ONS break down with the pronched construction and inflammation. AAA12112 to AAA1212 to present the minimal of the content of the co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaematic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; CODD;
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or.
                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine receptor related polynucleotide SEQ ID NO:2790.
  Length 742;
                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
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100.0%; Score 18; DB 13;
100.0%; Pred. No. 15;
iive 0; Mismatches 0;
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                                                                                                                                                  488 CCACACCTATTCATACTC 505
                                                                                                        1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                         AAA35101 standard; DNA; 3375
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                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                        Local Similarity 100.
nes 18; Conservative
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                                                                                                                                                                                                                                                                                                                                              AAA35101;
  Query Match
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Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                         Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antinifiammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adheaion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central
                                                                                                                                                  Human low adenosine antisense oligonucleotide related sequence #2790.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 1135-1136; 1592pp; English.
                    AAF21223 standard; DNA; 3375 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAR-2000; 2000WO-US008020.
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                                                                                                          (first entry)
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                                                                                                          14-MAR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                cancer; 88.
                                                               AAF21223;
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AAF21223
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nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to

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receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleorides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or broncheconstriction) and/or lung inflammation, allergy (ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21843 reperseent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
nervous system (CNS) and peripheral nervous and non-nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the present invention
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Seguence 3375 BP; 837 A; 866 C; 764 G; 908 T; 0 U; 0 Other;

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100.0%; Score 18; DB 3; Length 3375; 100.0%; Pred. No. 17;
                                        0; Indels
                                        0; Mismatches
                                                                    18
                                                                     1 CCACACCTATTCATACTC
Ouery Match
Best Local Similarity 100..
Best Local Similarity 100..
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3304 CCACACCTATTCATACTC 3321

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ABZ96917 standard; DNA; 3375
                 Human nucleic acid sequence.
             (first entry)
             17-0CT-2003
        ABZ96917;
RESULT 31
AB296917
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Human, antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodiation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Homo sapiens

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC

Aguilar Pabalan J, Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Nyce JW, I Miller S,

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired or respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid ubiquinone.

Disclosure; SEQ ID NO 12159; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of

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continuity of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory servoid and ubiquinone. A composition of the invention has antiinflammatory, antiallargic, antiasthmatic, hypotensive, cimmunosuppressive, and cytostatic activity. The composition may have a conse in antisense gene therapy. The composition is useful for treating or preventing a respiratory lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or deptenting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject stessue, or treating bronchocomstriction, clung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed approach in the printed approach in the printed and the pr
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Pred. No. 17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         at ftp.wipo.int/pub/published_pct_sequences
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Gaps

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ABD20766 standard; DNA; 3375 BP ABD20766; RESULT 32 **ABD20766**

Human pulmonary and inflammatory target DNA #377.

(first entry)

29-JUL-2004

Human, antisense, bronchoconstriction, allergy, hyposecretion, pain, respiratory tract inflammation, adenosine senstivity; lung, cancer, surfactant depletion; antiallargic, antiinflammatory; antiasthmatic; analgesic, hypotensive; immunosuppressive; cytostatic, cystic fibrosis, beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds.

WO200285309-A2

31-OCT-2002

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

EPIG-) EPIGENESIS PHARM INC

Aguilar Pabalan J, Katz E, Sandrasagra A, Ka ,, Shahabuddin S; Li Y, San Tang L, Miller S, Nyce JW,

WPI; 2003-093058/08.

S oligonucleotide containing less percentage of adenosine, targeted nucleic acids associated with lung airway or lung dysfunction, and Pharmaceutical composition for treating asthma, has antisense bronchodilating agent.

Claim 15; SEQ ID NO 12159; 763pp; English

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating

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bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, suffactant deplation on hyposecretion, when administered to a mammal. The oligomucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) adelivery device, in separate containers, (b) the oligomucleotides, (c) the invention also acariter and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, of the invention has antiallergic, antiinflammatory, antiasthmatic, of the invention and administered and cytostatic activity, is a beta-adrenargic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or treating a respiratory, and/or bronchoconstriction and/or lung or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and associated with a disease or condition such as pulmonary viscomatriction, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary disease, pulmonary infections, branchine content of the anti-sense oligos corresponding to the reduced adenosine content of the anti-sense oligos corresponding to the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, ecc, tissue environment and thereby, to prevent any unwanted effects due to it
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100.0%; Score 18; DB 11; Length 3375; 100.0%; Pred. No. 17; 0; Indels 0; Sequence 3375 BP; 837 A; 866 C; 764 G; 908 T; 0 U; 0 Other; 1 CCACACCTATTCATACTC 18 18; Conservative Local Similarity Query Match Matches

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Gaps . 0

> 3304 CCACACCTATTCATACTC 3321 셤 ઠે

AAA35103 standard; DNA; 6771 BP AAA35103;

28-JUL-2000 (first entry)

Human adenosine receptor related polynucleotide SEQ ID NO:2792.

Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.

Homo sapiens.

WO200009525-A2.

24-FEB-2000

99WO-US017712. 03-AUG-1999; 98US-0095212P. 03-AUG-1998;

(UYEC-) UNIV EAST CAROLINA

Nyce JW;

WPI; 2000-205971/18.

New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or

Disclosure; Page 1058-1059; 1343pp; English.

The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets concleid acids involved in bronchoconstruction, allegies, and/or inclaimmation. The ON can have antifilammatory, antiallergic, antiallergic, antiallergic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating of e.g. ischaemic conditions, pullmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cysic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the voluments of an effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA3313 to AAA35312 represent the invention, which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 186, but the sequences of the disclosure of the present invention. N B. Sequences given in the disclosure of the present invention. N B. Sequences given in the disclosure of the present invention. N B. is that the corresponding SEQ ID NO: sequences given in the sequence

Seguence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;

Gaps . 0 100.0%; Score 18; DB 3; Length 6771; 100.0%; Pred. No. 18; 0; Indels Mismatches .; 0 Conservative Local Similarity es 18; Conserv Query Match Best Loca Matches

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RESULT 34 AAF21225 AAF21225;

BP.

AAF21225 standard; DNA; 6771

14-MAR-2001

(first entry)

Human low adenosine antisense oligonucleotide related sequence #2792.

Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.

WO200062736-A2.

26-OCT-2000.

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The present invention describes low adenosine (A) content antieense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with Lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoslobulina and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide receptors, bradykinin receptors, central nervous and non-nervous system of fefensins, growth factors, vasoactive peptides and receptors, binding proteins growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy (ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergy syndome and legisles, asthmatise (FR) mainary and allergial (FR) mainary and or wallergy and malignancy allergy and malignancy and allergial pulmonary was allergy and malignance was allergial or was a malignance was and was allergial or washing and washing and malignance washing and malignance washing and malignance washing and washing and was
                                                                                                                                                                                                                                                                                                  Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF1843 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 18; DB 3; Length 6771; 100.0%; Pred. No. 18; 0; Indels (ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 1137-1139; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               313 CCACACCTATTCATACTC 330
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                                                                                                                                                                                                                                                                                                                                                           and respiratory obstructions.
24-MAR-2000; 2000WO-US008020
                                                      99US-0127958P
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                                                                                                      (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
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es 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the present invention
                                                                                                                                                                                                                                               WPI; 2000-679539/66
                                                         06-APR-1999;
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                                                                                                                                                                                         Nyce JW;
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The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory strend and ubiquinone. A composition of the invention as antiinflammatory, antiallergic, antiasthmatic, hypotensive, in each of the invention case in antisense gene therapy. The composition may have a immunosuppressive, and cytostatic activity. The composition may have a cuse in attisense gene therapy. The composition may have a compension of the prophylactic or therapeutic respiratory effect of an antiinflammatory stratorid in a subject, for reducing or depleting levels of or entainflammatory sersoid in a subject, for reducing or depleting levels of a multiplammation, producing bronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung suffactant in a subject, stissue, or treating bronchodilation.

Clung inflammation, lung allergies, or a respiratory disease or condition. In the stine of a patent is not represented in the printed as pecification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                             Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;
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18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 12161; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                at ftp.wipo.int/pub/published_pct_sequences
lung inflammation; respiratory disease; ds.
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                                                                                                                                                                                                                                                                                               Li Y, Sandrasagra A, K.
Tang L, Shahabuddin S;
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                                                                                                                                                                                                           24-APR-2001; 2001US-0286137P.
                                                                                                                                                                     23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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Best Local Similarity 100.
Matches 18; Conservative
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                                            Homo sapiens.
                                                                                                                              31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ubiquinone.
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Gaps

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This invention describes a novel composition, all rist active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated in the langer and and allergies and or surfactant hypoproduction are associated and allergies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        with a disease or condition such as pulmonary vasconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system
respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention describes a novel composition (a) a first active agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                      Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pharmaceutical composition for treating asthma, has antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 15; SEQ ID NO 12161; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                      Sandrasagra A, Ka
J, Shahabuddin S;
                                                                                                                                                                                                                                                       23-APR-2002; 2002WO-US013143.
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                                                                                                                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bronchodilating agent.
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Tang L,
                                                                                                                                                        WO200285309-A2
                                                                                                           Homo sapiens.
                                                                                                                                                                                                      31-OCT-2002
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Miller S,
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e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                    Sequence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;
                                                                                                                                                                                                   100.0%; Score 18; DB 11; Length 6771; 100.0%; Pred. No. 18;
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313 CCACACCTATTCATACTC 330
1 CCACACCTATTCATACTC 18
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ADI35082 standard; DNA; 12174 BP RESULT 37 ADI35082 ID ADI35

Human phopholipase A2 (PLA2G1B) DNA SegID 1.

17-JUN-2004 (first entry)

ADJ09983;

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Gaps

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Indels

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Pred. No. 18; 0; Mismatches

Best Local Similarity 100. Matches 18; Conservative

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to diagnosing a predisposition to fat deposition or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         leanness in a subject comprising detecting the presence or absence of a polymorphic variation associated with fat deposition at a polymorphic site in a PLA2G1B nucleotide sequence in a nucleic acid sample from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    subject, where the presence of the polymorphic variation indicates a predisposition to fat deposition in the subject. The polymorphic variation is a guanne at position in the subject. The polymorphic the present sequence. The method is useful for diagnosing a predisposition to fat deposition or leanness in a subject, and consequently for diagnosing a predisposition to non-insulin dependent diabetes mellitus (NIDDM) in a subject and conditions such as hyperinsulinemia, hypertension, glucose intolerance, dyslipidemia, hypercosqulability, or microalbuminuria, which can lead to early prescription of preventive measures. The present sequence represents a human PLA2GIB nucleotide sequence.
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                                                                                                              PLA2GIB ; fat deposition; leanness; polymorphism;
non-insulin dependent diabetes mellitus; NIDDM; hyperinsulinemia;
hypertension; glucose intolerance; dyslipidemia; hypercoagulability;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12174 BP; 3217 A; 2992 C; 2738 G; 3215 T; 0 U; 12 Other;
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                                                                                Human PLA2G1B nucleotide sequence.
                                                                                                                                                                  microalbuminuria; human; gene; ds
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nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       Langdown ML;
                                                                                                                                                                                                                                                                                                                                                                    (SEQU-) SEQUENOM INC.
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                                                                                                                                                                                                                                 WO2004002295-A2.
                                                                                                                                                                                                   Homo sapiens.
                                               22-APR-2004
                                                                                                                                                                                                                                                                  08-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the subject
                                                                                                                                                                                                                                                                                                                                                                                                       Adam GIR,
               ADI35082;
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Identifying a candidate therapeutic for fat reduction, useful for treating diabetes, by introducing a test molecule to a system comprising PLA2GIB protein or nucleic acid, and determining the presence of interaction between the compounds.
human; gene; ds; fat reduction; fat deposition; phospholipase A2; PLA3CIB; chromosome 12q4; single nucleotide polymorphism; SNP; appetite suppressant; lipase inhibitor; exercise regimen; obesity; non-insulin dependent diabetes mellitus; NIDDM; cardiovascular disorder;
                                                                                                                                name= "Single nucleotide polymorphisms"
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                                                                                                                                          replace (839, a)
                                                                                                         replace (436,c)
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                                               nypertension; antidiabetic.
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                                                                        Homo sapiens
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This invention relates to a novel candidate therapeutic agent useful for fat reduction and disorders related to fat depositions. Specifically, it refers to polymorphic variations in the phospholipase A2 (PLASGIB) DNA, which is located on chromosome 1244 and has been associated with central fat deposition. The present invention describes methods to detect the presence or absence of these single nucleotide polymorphisms of PLASGIB, in particular G7338A and T9183G, and subsequently provide treatment that reduces fat deposition. This treatment may consist of an appetite reduces fat deposition. This treatment may consist of an appetite regimen, a lipase inhibitor, a phospholipase inhibitor, an exercise regimen, a dietary regimen, psychological counselling, psychotherapy or a psychotherapeutic. Accordingly, PLASGIB is a target for reducing fat deposition and it can be used to treat both obesity and non-insulin dependent diabetes mellitus (NIDDM), as well as cardiovascular disorders such as hypertension. As such, it exhibits antidiabetic activity. This polynucleotide sequence is the human PLASGIB DNA of the invention.
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eplace(3968,A)
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053. .9613
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Claim 1; SEQ ID NO 1; 116pp; English.
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replace(3845,A)
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Best Local Similarity 100.
Matches 18; Conservative
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                                                                                                                                                                         ABV95110;
                                                                                                                                                   polymorphic variant for a reference sequence for the PLA2GIB gene or its fragment, or a polymorphic variant of a reference sequence for the PLA2GIB gene or its fragment, or a polymorphic variant of a reference sequence for a PLA2GIB gene or its conversation or its fragment. Also included are haplotyping/genotyping for a PLA2GIB gene of an individual, predicting the haplotype pair for the PLA2GIB gene of an individual, identifying an association between a trait and at least one haplotype pair of the PLA2GIB gene, an isolated genotyping oligonucleotide for detecting a polymorphism in the isolated genotyping oligonucleotide for detecting a polymorphism in the PLA2GIB gene, a recombinant non-human organism transformed or transfected with the PLA2GIB sequence, where the organism expresses a PLA2GIB procein encoded by the first nucleotide sequence or by the polymorphic variant canced by the gramment, an isolated polypeptide comprising a sequence which is a colymorphism and and for the PLA2GIB procein or its fragment, an anti-PLA3GIB monoclonal antibody, screening for drugs targeting PLA2GIB, a computer system for storing and analysing the supersystem and and for the PLA2GIB procein or by the pla2GIB variant is useful in studying the expression and function of PLA2GIB, and in expressing PLA2GIB protein for use in socientified or pLA2GIB protein for servening for candidate drugs of treat diseases related to PLA2GIB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful for studying the effect of the variation on the biological activity of PLA2GIB as well as on the binding affinity of candidate drugs targeting PLA2GIB. The present sequence is the PLA2GIB gene which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activity (e.g. pancreatitis and pancreatic cancer) and for therapeutic purposes. The transganic organism is useful for studying expression of the PLA2G1B isogenes in vivo, for in vivo screening and testing of drugs targeted against PLA2G1B protein, and for testing the efficacy of therapeutic agents and compounds in a biological system. The antibody is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel isolated human Phospholipase A2, Group IB pancreas polynucleotide, for therapeutic purposes, for studying expression and function of the polynucleotide and for expressing the phospholipase protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated human Phospholipase A2, Group IB
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/*tag= j
/label= SNP
/note= "Single nucleotide polymorphism"
6874. .9489
                                                                                                                                                                                                                                                                                         /note= "Single nucleotide polymorphism"
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                                                                                                                                                                                                                replace (9531, A)
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/label= SNP
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9490. .9613
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kazemi A, Kliem SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-303982/34.
P-PSDB; AAU78667.
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Score 18; DB 6; Length 13612; Pred. No. 19;

100.0%; 100.0%;

Best Local Similarity

Query Match

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The invention relates to an isolated polynucleotide (I) comprising: (a) any of a group of over 4000 nucleotide sequences (ABV94628-ABV99145); (b) complements of (a); (c) sequences consisting of at least 20 contiguous residues of (a); (d) sequences consisting to (a), under moderately stringent conditions; (e) sequences having at least 75% or 90% identity to (a); or (f) degenerate variants of (a). Polypeptides (ABR66596-ABR66596-ABR66596) encoded by (I) and oligonucleotide can be used to detect cancer in a patient and compositions comprising polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations and antigen presenting cells expressing the polypeptide are useful in treating pancreatic cancer and stimulating an immune response. The polynucleotides can be used as probes or primers for nucleic acid hybridisation, in the design and preparation of riboxyme molecules for inhibiting expression of the tumour perparation of riboxyme molecules for inhibiting and proteins in the tumour cells, in vaccines and for gene therapy. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer; gene therapy; vaccine; immunostimulant;
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Pred. No. 1.6e+02;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human pancreatic cancer expressed cDNA SEQ ID NO 518.
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                                                                6826 ccacaccrarrcaracrc 6843
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18
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31-JAN-2001; 2001US-0265682P.
21-MAR-2001; 2001US-0267568P.
21-MAR-2001; 2001US-0278651P.
28-APR-2001; 2001US-0287112P.
16-MAR-2001; 2001US-039631P.
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94.1%;
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1 CCACACCTATTCATACTC
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Best Local Similarity
Matches 16; Conserva
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                                                                                                                                                                             RESULT 40
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cotton variety DP50B primed seed cDNA library (LIB3825). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the US patent office at seqdata.uspto.gov/sequence.html?DocID=US20040123340

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The invention relates to 17880 cotton expressed sequence tags (BSTs; ACN45220-ACN63099). The BSTs were isolated from CDNA libraries generated from primed or non-primed seeds from variety DP50B, mature seeds from variety Coker 312 Boswell 96 Field, and androecium tissue, gynoecium tissue, developing fibres, carpel walls and septe from variety Nucotton33B. The invention also relates to substantially purified to proteins or their fragments encoded by nucleic acid molecules of the invention, and to transformed plants having a nucleic acid construct comprising a nucleic acid of the invention. The cotton ESTs are useful molecular tags to isolate genetic regions, to isolate genes, to determine gene function and to determining whether genes are members of a particular gene family. The nucleic acid molecules may be used for isolating a variety of agronomically significant genes are also useful for identifying genes important in initiating and maintaining seed germination or that may be used to mitigate stresses encountered during seed germination. The ESTs additionally enable the acquisition of promoters and cis-regulatory elements which will be useful to express and service the second contains and approach in the same and cis-regulatory elements which will be useful to express and service the backing seed germination in the ESTS and colditionally enable the acquisition of adronomically significant genes in these tissues and conterts tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated nucleic acid molecule that encodes a plant protein or its fragment, useful for isolating a variety of agronomically significant genes associated with plant growth, quality or yield, and as molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cotton; plant; EST; expressed sequence tag; transgenic plant; seed; variety DP50B; library LIB3825; molecular tag; molecular marker; genetic mapping; molecular mapping; seed germination; plant growth; plant quality; plant yield; plant breeding; tissue printing; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cotton primed seed EST Clone ID: LIB3825-020-Q1-K6-B2, SEQ:1223.
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                                                                                                                                                                                                                                                               ACN46442 standard; cDNA; 611 BP
CCACACCTATTCATACT 17
                                              S CCACACCTATTCATANT 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-DEC-2001; 2001US-00021323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-DEC-2000; 2000US-0255619P
                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
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FENG P C C.
FINCHER K L.
ZIEGLER T E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-479808/45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gossypium hirsutum
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                                                                                                                                                                                                                                                                                                                                        ACN46442;
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The invention relates to a recombinant polynucleotide comprising any of
the 58798 Cotton plant CDNA sequences mentioned in the specification.

CC the 58798 Cotton plant cDNA sequences mentioned in the specification acid
sequences mentioned in the specification and producing a plant having an improved property.

CC comprises transforming a plant with a recombinant construct comprising a
comprises transforming a plant with a recombinant construct comprising a
comprises transforming a plant with a recombinant construct comprising a
comprises transforming a plant with a recombinant construct.

CC comprises transforming a plant with a recombinant construct.

CC comprises transforming a plant with a recombinant construct.

CC comprises transforming a plant cold toperably joined to a
vith the property, and growing the transformed plant. The polypeptide is
cuseful for improving plant cold tolerance, manipulating growth rate in
classification of the cell cycle pathway, improving plant
drought tolerance, providing increased resistance to plant disease,
conducting galactomannam (or lignin or plant growth regulators), improving
c plant heat tolerance, improving plant tolerance to herbicides, increasing
the rate of homologous recombination in plants, improving plant
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant nucleic acid molecules and polypeptides from Gossypium hirsutum, useful for producing plants with improved biological characteristics (e.g. improved plant cold or drought tolerance).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           drought tolerance; plant disease resistance; galactomannan; lignin; plant growth regulator; heat tolerance; herbicide tolerance; homologous recombination; extreme osmotic condition tolerance; pathogen resistance; pest resistance; yield; photosynthesis; seed oil;
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ss; plant; cold tolerance; growth rate; cell cycle pathway;
                                                                                                                                                                                     ö
                                                                                                                                       Query Match 85.6%; Score 15.4; DB 13; Length 611; Best Local Similarity 94.1%; Pred. No. 3.6e+02; Matches 16; Conservative 0; Mismatches 1; Indels 0.
                                                                                                  Sequence 611 BP; 134 A; 131 C; 145 G; 201 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cotton cDNA seguence, SEQ ID 899.
                                                                                                                                                                                                                                                                                                                                                                            ADR60118 standard; cDNA; 1733 BP
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12-DEC-2001; 2001US-00021323.
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                                                                                                                                                                                                                                2 CACACCTATTCATACTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         stress resistance.
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                                                                                                                                                                                                                                                                                                                                     RESULT 42
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and also permits the acquisition of molecular markers useful in breeding schemes, genetic and molecular mapping, and in cloning of agronomically significant genes. The nucleic acid molecules are further useful for detecting the expression level or pattern of a protein or mRNA and for detecting the presence or quantity of a protein by tissue printing. The present sequence represents a specifically claimed EST isolated from a

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Gaps

.; 0

Score 15.4; DB 6; Length 3 Pred. No. 4.1e+02; 0; Mismatches 1; Indels

; 0

Query Match
Best Local Similarity 94.1%;
Matches 16; Conservative

Best Loc Matches

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information supplied to Derwent by the European Patent Office Sequence 3093 BP; 866 A; 592 C; 790 G; 845 T; 0 U; 0 Other;

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to extreme osmotic conditions or to pathogens or pests, improving yield by modification of photosynthesis, modifying seed oil or protein yield and/or content, improving yield by modification of carbohydrate, nitrogen or phosphorus use and/or uptake, or improving yield by providing improved plant growth and development under at least one stress condition. The polynucleotide and polypeptide may also be used in recombinant DNA constructs, in physical arrays of molecules, as plant breeding markers, or in computer-based storage and analysis systems. The present sequence is a Cotton plant cDNA of the invention. NOTE: The sequence data for this patent din not form part of the printed specification, but was obtained in electronic format directly from USPTO at sequence. However only 6585 seqdata.uspto.gov/sequence.html?DocID=20040181830. However only 6585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Identifying a stress condition to which a plant cell has been exposed and producing plants with increased tolerance to these abiotic stresses.
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                    polynucleotide sequences were available, the remaining 52213 polynucleotides and all 58798 protein sequences were not present.
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                                                                                                                                                                                                                                                      Sequence 1733 BP; 376 A; 351 C; 389 G; 617 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana stress regulated gene SEQ ID NO 1570
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                                                                                                                                                                                                                                                                                                                      Mismatches
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26-JAN-2001; 2001US-0264647P.
22-JUN-2001; 2001US-0300111P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABZ13765 standard; DNA; 3093
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94.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-304127/34.
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Best Local Similarity
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The innernion relates to promoters for root-specific or constitutive regulation of plant gene expression. Also included are an isolated polynucleotide (NI) (comprising a plant nucleotide sequence that directs root-specific transcription of an operatively linked nucleic acid segment in a plant cell, where the plant nucleotide sequence that a segment in a plant cell, where the plant nucleotide sequence is from a conformation of an operatively linked nucleic acid segment in a plant cell, where the plant nucleotide sequence is from ADZ7492-ADZ7492, ADZ75008-ADZ75036 or ADZ75026-ADZ75034 or a colated polynucleotide (NI) (comprising a promoter selected from nucleotide sequence that directs constitutive transcription of an operatively linked nucleic acid segment in a plant cell, where the plant nucleotide sequence is from a gene encoding a polypeptide that is nucleotide sequence is from a gene encoding a polypeptide that is comprising a promoter selected from ADZ7493-ADZ74930, ADZ75006, ADZ75007, ADZ75035-ADZ75006, ADZ75007, ADZ75035-ADZ75006, ADZ75007, ADZ75035-ADZ75006, ADZ75007, ADZ75035-ADZ75006, ADZ75007, ADZ75035-ADZ75006, ADZ75007, ADZ75037-Comprising a plant nucleotide sequence that is solated polypucide that is substantially similar to a polypeptide conding a polypeptide that is substantially similar to a polypeptide conding a polypeptide that is substantially similar to a polypeptide
                                                                                                                                                                              Crop improvement; gene; ds; plant; plant disease; plant fungal disease; drought resistance; herbicide resistance; insect resistance; abiotic stress tolerance; salt tolerance; heat tolerance; cold tolerance;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to promoters for root-specific, leaf-specific or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Promoters for root-specific, leaf-specific or constitutive regulation plant gene expression, useful for regulating the expression of selecte transgenes (e.g. stress tolerance and defence related genes) in economically important plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cooper B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Han B, Wang X,
                                                                                                                                      Arabidopsis leaf-specific open reading frame, SEQ ID 630
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhu T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SYGN ) SYNGENTA PARTICIPATIONS AG
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ADZ75114 standard; DNA; 3093 BP
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29-DEC-2000; 2000US-0258692P.
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                                                                                       30-JUN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Budworth P, Brown D,
                                                                                                                                                                                                                                                    gene expression; food
                                                                                                                                                                                                                                                                                               Arabidopsis thaliana.
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                                                                                                                                                                                                                                                                                                                                            WO200198480-A2
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                                                                                                                                                                                                                                                                                                                                                                                      27-DEC-2001
                                            ADZ75114;
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The invention relates to identifying a stress condition to which a plant representative of expressed polynucleotides in the plant cell with an array or probes representative of the plant cell genome; and (b) detecting a profile of expressed polynucleotides in the plant cell with an detecting a profile of expressed polynucleotides in the plant cell characteristic of a stress response. The method is useful in the production of transgenic plants, cells and seeds and in producing plants with increased tolerance to abiotic stress. The present sequence is that of an arrabidopsis thaliana stress regulated gene (ABZ12195-ABZ1754) used in methods of the invention. Note: The sequence data for this patent is not represented in the printed specification but is based on sequence

17-JAN-2003; 2003WO-US001558

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custoded by an Arabidopsis gene having a promoter selected from one of ADST317-ADST2527, a recombinant vector comprising Ni-N3, an expression cassette comprising the appearatively linked to an open reading frame, a recombinant vector comprising the appearatively linked to an open reading frame, a recombinant vector comprising the expression cassette, a transformed plant containing the expression cassette, a transformed plant comprising the expression cassette, a transformed plant comprising the expression cassette, a transformed plant comprising transformed plant calls (where the cells contain the expression cassette), a method (M1) for augmenting a plant genome, a method (M2) to identify a gene having a promoter (the expression of which is altered in constitutive in a plant cell), a method (M4) to identify a constitutive in a plant cell), a method (M4) to identify a constitutive in a plant cell, a method (M4) to identify a constitutive in a plant cell of which is altered in leaves of plant) and a method to alter the phenotype of a plant cell comprising introducing the expression cassette. For the expression cassette, the open reading frame is from an insect resistance gene, a herbicide copen reading frame is from an insect resistance gene, a herbicide resistance gene, a stress resistance gene, a wired disease resistance gene, a wired disease resistance gene, a method condition unlike and the second copen and an extracteritity gene, a selectable marker gene, a condition gene, a meatode disease resistance gene, a method condition, and the selectable marker gene, a negative selectable marker, agene affecting gene. The stress resistance gene, a negative selectable marker gene, a condition, excessive moisture, excessive salt, or condition, excessive salt, or condition gene, an expension of selected transgenes in economically important plants. For expression of selected transgenes in economically important plants of conditions of selected transgenes in economically important plants of for expressing defense resistan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            at ftp.wipo.int/pub/published_pct_sequences
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Caenorhabditis elegans.

WO2003062448-A2

31-JUL-2003

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New SQV polypeptides and nucleic acids having a glycosaminoglycan biosynthetic biological activity, useful for diagnosing and treating a connective tissue disease, progeroid disorder, or cellular damage related
                                                                                                                                                                                                                            The invention comprises the amino acid and coding sequences of SQV proteins (i.e. SQV-1, SQV-2, SQV-4, SQV-5 and SQV-6), having a glycosaminoglycan biosynthetic biological activity. The SQV DAA and protein sequences are useful for diagnosing and treating connective tissue disease, such as: Bhless-Danlos syndrome, progeroid disorder, or cellular damage related to aging. The SQV DNA and protein sequences may also be used to identify compounds that modulate a glycosaminoglycan biosynthetic biological activity. The present nucleic acid represents an SQV DNA sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= f
/label= glaA polyadenylation and termination signals
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                  Score 15.4; DB 10; Length 3120; Pred. No. 4.1e+02;
                                                                                                                                                                                                                                                                                                                                                           Sequence 3120 BP; 1004 A; 580 C; 551 G; 985 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aspergillus niger; catalase; catR; hydrogen peroxide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Construct EC2L (Contains catR and pyrG codingsequences).
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label= catR coding region.
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label= Linker sequence
                                                                                                                                                                                                          Disclosure; SEQ ID NO 1; 247pp; English
                                                                      (MASI ) MASSACHUSETTS INST TECHNOLOGY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAQ46249 standard; DNA; 8528 BP
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                                 18-JAN-2002; 2002US-0349630P
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                                             2002US-0390930P
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les 16; Conservative
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                                                                                               Hwang HY;
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                                                                                                                      WPI; 2003-627462/59.
                                               24-JUN-2002;
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                                                                                               Horvitz HR,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
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                                                                                                                                                                                     to aging.
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The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma an macular degeneration, arreriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, AlDS, epilepsy, neurofibromatosis, rheumatoid arthritis, psoriasis and inflammatory/ulcerative bowel diseases. The present sequence is a gene of the invention
                                                                                                                                               chemically modified gene, useful for associated with abnormal cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recombinant nucleic acid useful for diagnosis and treatment of carcinoma comprises a nucleotide sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS ACN44150 Accession Acn44150
                                                                                                                                                                                                                                                                                                                                                               Sequence 17934 BP; 4443 A; 283 C; 4663 G; 8545 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                          85.6%; Score 15.4; DB 6; Length 17934; 94.1%; Pred. No. 4.8e+02; ive 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                      Claim 1; SEQ ID NO 1691; 32pp + Sequence Listing; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytostatic; carcinoma; lymphoma; cancer; human; gene; ss.
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310000
410000
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                                                                                                                                               Nucleic acid comprising fragment of diagnosis and treatment of diseases
                                                                                       Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14397 CACACCTATACATACTC 14381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human genomic sequence hCG27278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACN44150 standard; DNA; 439892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence split into 5 fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CACACCTATTCATACTC 18
                 30-JUN-2000; 2000DE-01032529.
01-SEP-2000; 2000DE-01043826.
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nes 16; Conservative
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                                                                                      Piepenbrock C,
                                                           (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-328604/31.
                                                                                                                 WPI; 2002-130909/17
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ACN44150 0
ACN44150 1
ACN44150 2
ACN44150 3
ACN44150 3
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                                                                                                                                                                           methylation.
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                                                                                       olek A,
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                       The Aspergillus niger catk gene was identified and isolated. The native promoter of the gene was removed and replaced with the Aspergillus glucoamylase promoter gene. This modification allows increased expression of the catk gene without the need to supply hydrogen peroxide to induce expression. Cells into which this construct is inserted preferably have the glucose oxidase gene (goxA) deleted. This deletion minimises the generation of gluconate waste material and the use of waste treatment processes. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                    Aspergillus niger catR gene sequence - from which catR promoter has been deleted and Aspergillus glucoamylase promoter gene has been inserted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; immune system disease; cytosine methylation; antiasthmatic; antianzteriosclerotic; antianaemic; cytostatic; nootropic; neuroprotective; anti-HIV; anticonvulsant; ophthalmological; antirheumatic; antiartitic; antidiabetic; antipsoriatic; antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia; acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy; neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease; gene;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 15.4; DB 2; Length 8528;
Pred. No. 4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
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                                                        /*tag= h
/label= Linker sequence.
                /*tag= g
/label= pyrG gene.
8511. .8528
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92US-00846181
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94.1%;
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 .8510
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                                                                                                                                                                                                                                 (GEMV ) GENENCOR INT INC.
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                                                                                                                                                                                                                                                             Berka RM, Fowler T,
                                                                                                                                                                                                                                                                                         WPI; 1993-303480/38
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                                                                                                                                                            04-MAR-1993;
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04-MAR-1992;
                                            misc_feature
                                                                                                   WO9318166-A2
                                                                                                                                16-SEP-1993
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                                                                                                                             are associated with carrinomas. The sequences are useful for: (i) for screening drug candidates; (ii) for screening of bioactive agent capable of bioactive agent capable of medulating the activity of CAP; (ii) for screening of a bioactive agent capable of medulating the activity of CAP; (iv) for evaluating the effect of a candidate carcinoma drug; (v) for diagnosing carcinoma; (vi) for inhibiting the activity of CAP; (vii) for treating carcinoma; (vii) for neutralizing the activity of CAP; (vii) for treating carcinoma; (vii) for neutralizing the effect of CAP; (vii) for diagnosing carcinoma or a propensity to carcinoma; and (xi) for determining Carcinoma Associated (CA) gene copy number. In addition, the CA genes are useful as DNA vaccines and the CAP are useful as markers of carcinoma including lymphoma. The present sequence is one such CA coding sequence. Note: This patent is an equivalent to basic patent US2002182586A1, for which no sequence data was published
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 439892 BP; 100791A; 104435C; 106090G; 116168T; 0U; 12408Other;
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                                                                                                   present invention relates to novel DNA and protein sequences which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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Huntington's, spinocerebellar ataxia type 1,
spinocerebellar ataxia type 3, SCA, Machado-Joseph disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 15.4; DB 11; Length 110000; Pred. No. 5.6e+02;
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                                 Claim 1; SEQ ID NO 454; Opp; English.
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94.1%;
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03-FEB-2003; 2003US-0444614P
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Best Local Similarity 94.1
Matches 16; Conservative
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ADP44620/
ADP4620/
AC ADP4
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The invention relates to a novel medical system for treating a neurodegenerative disorder comprising an intracranial access device, a mapping means for locating a predetermined location in the brain, a deliverable amount of a small interfering RNA (siRNA), or vector encoding the siRNA, and a delivery means. The system of the invention has

Claim 23; SEQ ID NO 10; 228pp; English.

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This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a carbylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligoners and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of cligoners, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations of signal cellor tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ13410-
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applications related to the CNS and may be useful for treating a neurodegenerative disorder, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, spinocarebellar ataxia (SCA) types I and : (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA) The current sequence is that of the murine alpha-synuclein (SNCA) DNA (SEQ ID 10) of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, cytosine methylation, 5'-CpG-3'; uracil; cytosine; diagnosis; drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism; SNP; cell differentiation; ds.
                                                                                                                                             Sequence 118777 BP; 35967 A; 22351 C; 22620 G; 37839 T; 0 U; 0 Other;
                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oligonucleotide for detecting cytosine methylation SEQ ID NO 14930.
                                                                                                                                                                                  85.6%; Score 15.4; DB 12; Length 118777; 94.1%; Pred. No. 5.6e+02; ive 0; Mismatches 1; Indels 0; (
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                                                                                                                                                                                                                                                                     1 CCACACCTATTCATACT 17
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05-SEP-2000; 2000DE-01044543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diagnosis and prognosis, con
from chemically treated DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                 ABQ28339 standard; DNA; 544
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                                                                                                                                                                                                                                16; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-371829/40.
                                                                                                                                                                                                             Local Similarity
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                                                                                                                                                                                           Query Match
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Matches
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This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used:

(i) for diagnosis and/or prognosis of side effects of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation is used; investigating cell differentiation. The method allows the methylation is used.
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ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in the disclosure of the invention
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                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                            Oligonucleotide for detecting cytosine methylation SEQ ID NO 14929.
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                                                                                                              Length 544;
                                                                          Sequence 544 BP; 247 A; 145 C; 42 G; 110 T; 0 U; 0 Other;
                                                                                                                                                  0; Indels
                                                                                                              DB 6; Le
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                                                                                                          Score 15; DB 6; Pred. No. 5.8e 0; Mismatches
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                                                                                              83.3%; SCOL.
100.0%; Pre
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                                                                                         Ouery Match
Best Local Similarity 100...
Thes 15; Conservative
                                                                                                                                                                                      4 CACCTATTCATACTC 18
                                                                                                                                                                                                                      13 caccrarrcaracic 27
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ABQ28338/
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                                                                                                                                                                                                                                                                                                                                                    ss; gene; osteopathic; neuroprotective; nootropic; antiparkinsonian; cytostatic; gene therapy; diagnostic marker; morbid state; osteoporosis; neurological disease; Alzheimer's disease; Parkinson's disease; dementia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel 2495 cDNA, useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers.
                                                                            Gaps
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               Sequence 544 BP; 110 A; 42 C; 145 G; 247 T; 0 U; 0 Other;
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                                             83.3%; Score 15; DB 6; Le
100.0%; Pred. No. 5.8e+02;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 492; 2449pp; English
                                                                                                                                                                                                                       ADQ63331 standard; cDNA; 3951 BP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (REAS-) RES ASSOC BIOTECHNOLOGY
                                                                                                                                                                                                                                                                                                                      Novel human cDNA sequence #492.
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09-MAY-2003; 2003JP-00131392.
                                                                                                                             532 CACCTATTCATACTC 518
                                                                                                          4 CACCTATTCATACTC 18
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Best Local Similarity 100.
Matches 15; Conservative
                                                                              Conservative
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                                             Query Match
Best Local Similarity
Matches 15; Conserv
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RESULT 53

AAA69665;

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The invention relates to a system for detecting gene expression, which comprises one or two isolated DNA molecules that detect expression of a gene, where the gene corresponds to any of 8143 oligonucleotides (ABZ00010-ABZ08152) each having 50 base pairs (bp). The system is useful for leukocyte expression profiling. It is particularly useful for diagnosing a disease, monitoring (rate of) progression of a disease, predicting therapeutic outcome, determining prognosis for a patient, predicting disease complications in an individual or monitoring response to treatment in an individual. The disease include cardiac allograft rejection, kidney allograft rejection, liver allograft rejection, atherosclerosis, congestive heart failure, systemic lupus erythematosus, theumatoid arthritis, osteoarthritis or cytomegalovirus infection. The
                                                                                                                                       Human, leukocyte, gene expression profiling, allograft rejection,
atherosclerosis, congestive heart failure, systemic lupus erythematosus,
rheumatoid arthritis, osteoarthritis, cytomegalovirus, infection, gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New system for leukocyte expression profiling, diagnosing a disease, or monitoring (the rate of) progression of a disease, e.g. atherosclerosis or congestive heart failure, comprises diagnostic oligonucleotides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present sequence is that of a human leukocyte expressed cDNA of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 466 BP; 135 A; 74 C; 131 G; 110 T; 0 U; 16 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Altman P, P;
, Johnson F;
                                                                                         Human leukocyte derived cDNA SEQ ID NO 8758.
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Quertermous T,
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                                                                                                                                                                                                                                                                                                                                                                                                               22-OCT-2001; 2001WO-US047856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-OCT-2000; 2000US-0241994P.
08-JUN-2001; 2001US-0296764P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACC62584 standard; cDNA; 506
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                                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BIOC-) BIOCARDIA INC.
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Ly N, Woodward R, Qu
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                                                                                                                                                                                                                                                                                                                 WO200257414-A2
                                                                                                                                                                                                                                                                   Homo sapiens.
                                           09-JAN-2003
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ABZ08767;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes plant polynucleotides encoding polypeptides involved in the production and modification of isoprenoids, cauch as terpenoid and steroid compounds. The polynucleotides are used in genome mapping, in physical mapping and in positional cloning of genes. The polynucleotides and polypeptides are useful in forestry and agriculture for manipulation of isoprenoid metabolism, in medicine for therapeutic effects, including direct application in diseased organisms or indirect application by transgenic organisms and in fermentation and chemical processing industries involving isoprenoids. In plant capplications, manipulating isoprenoid pathways or isoprenoid composition may, for example, affect plant development, pest resistance, and the value of extractives (e.g. pinene and myrcene). The ubiquitous and varied roles of isoprenoids make the polynucleotides attractive targets for biotechnical applications in a variety of fields. AAA69527 to AAA69690 and AAB18004 to AAB1843 represent Eucalyptus grandis and Pinus radiata polynucleotides and proteins used in the exemplification of the present
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                                                                                                                                                                                                              Eucalyptus grandis; Pinus radiata, modification; isoprenoid; plant;
metabolism; isoprenoid biosynthetic pathway; terpenoid; steroid;
genome mapping; physical mapping; positional cloning; forestry;
agriculture; medicine; fermentation; plant development; pest resistance;
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llarity 88.9%; Pred. No. 7.2e+02;
Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 362 BP; 101 A; 69 C; 86 G; 106 T; 0 U; 0 Other;
                                                                                                                                                                     Pinus radiata methyl sterol oxidase cDNA SEQ ID NO:139
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(FLET-) FLETCHER CHALLENGE FORESTS LTD.
                                                                                                                                                                                                                                                                                                                      pinene; myrcene; Monterey pine; ss.
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99US-0146441P
                                                                                                                       (first entry)
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P-PSDB; AAB18065.
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les 16; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                  WO200036081-A2
                                                                                                                                                                                                                                                                                                                                                                    Pinus radiata.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Havukkala IJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-DEC-1999;
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29-JUL-1999;
                                                                                                                       08-NOV-2000
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Phillips J;

Prentice J,

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Gaps

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IndelB

rice; endosperm; expressed sequence tag; biochip; EST; ss.

ABZ08767 standard; cDNA; 466 BP

RESULT 54 ABZ08767/c ID ABZ08 XX

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invention

Query Match

Length 466;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a novel rice endosperm specific expressed sequence tag (EST) and its constituted biochip. The cDNA sequence has one of 50 sequences. The EST technique is used for DNA sequencing to configure a rice endosperm cDNA library. The obtained expression sequence label goes through removing redundant sequences, indexing Internet expression, sorting and collecting non-redundent sequences to obtain 50 new expression sequence labels. The biochip is prepared from them by the microarray technique and has broad-spectrum application. The sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                  New rice endosperm specific expression sequence label for use in a biochip and for DNA sequencing to configure a rice endosperm cDNA
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alternative splicing event, genomic alteration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             shown in ACC62582-ACC62631 represent the EST's of the invention
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Pred. No. 7.4e+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 506 BP; 119 A; 122 C; 124 G; 141 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human genome derived single exon probe #25043.
                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 11-12; 30pp; Chinese.
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                                                                                                                         31-OCT-2001; 2001CN-00137670.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.2%;
88.9%;
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nes 16; Conservative
                                                                                                                                                                                                         (UYZH-) UNIV ZHEJIANG
                                                                                                                                                                                                                                                                                           WPI; 2003-269237/27
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(RANK/) RANK D R.
(HANZ/) HANZEL D K.
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Oryza sativa.
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                                      CN1366079-A.
                                                                                  28-AUG-2002
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Matches
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New human genome-derived single exon nucleic acid probes useful for human gene expression analysis, for identifying or characterizing alternative splicing events, for assessing genomic alterations or as tools for
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88.9%; Pred. No. 7.5e+02;
iive 0; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 584 BP; 145 A; 166 C; 66 G; 204 T; 0 U; 3 Other;
                                                                     Claim 1; SEQ ID NO 25043; 80pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364 ccácácrtarrccrácrc 381
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Best Local Similarity
                                           surveying tissues.
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01-SEP-2001; 2001WO-EP010074.

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ABQ20738 standard; DNA; 591 BP
             01-SEP-2001; 2001WO-EP010074
                     01-SEP-2000; 2000DE-01043826.
05-SEP-2000; 2000DE-01044543.
                                                                                                                                                                                                               1 CCACACCTATTCATACTC
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                                                                                                                                                                                            Query Match
Best Local Similarity 88.9
Matches 16, Conservative
                                            Piepenbrock C,
                                   (EPIG-) EPIGENOMICS AG.
                                                    WPI; 2002-371829/40.
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                                                                                                                                                                                                                                                                                                       Homo sapiens
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    07-MAR-2002
                                                                                                                                                                                                                                                      ABQ20738;
                                            Olek A,
                                                                                        This
                                                                                                                                                                                                                                     RESULT 58
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This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic camplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of label hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used:

(i) for diagnosis and/or prognosis of side effects of therapeutic drugs and a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc. particularly by detecting mutations or single nucleotide polymorphisms (SNP), and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined similtaneously. ABO13410.
                                                                                                                                                                                                                                                                                      Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of amplicons from chemically treated DNA.
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88.9%; Pred. No. 7.5e+02;
ive 0; Mismatches 2; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 591 BP; 134 A; 52 C; 175 G; 230 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; 56pp + Sequence Listing; 56pp; German
                                                                                                                                                                                       Guetig
                                                                                                                                                                                       Berlin K,
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05-SEP-2000; 2000DE-01044543.
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                                                                                                                                                                                       Olek A, Piepenbrock C,
                                                                                                                                    (EPIG-) EPIGENOMICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention describes a novel method for determining the degree of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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Pred. No. 7.5e+02;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; 56pp + Sequence Listing; 56pp; German.
                                                                                                                                                                                                                                                                           Guetig D;
                                                                                                                                                                                                                                                                        Berlin K,
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01-SEP-2001; 2001WO-EP010074. 01-SEP-2000; 2000DE-01043826.

07-MAR-2002.

05-SEP-2000; 2000DE-01044543

(EPIG-) EPIGENOMICS AG.

Guetig D; Berlin K, Piepenbrock C, olek A,

WPI; 2002-371829/40

Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of amplicons diagnosis and prognosis, com from chemically treated DNA.

Claim 12; 56pp + Sequence Listing; 56pp; German.

This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used:

(i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP); and (i) for differentiations of call or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ13410-ABQ4121 represent genomic DNA sequences used to illustrate the method for the contained in the disclosure of the invention

Seguence 601 BP; 183 A; 266 C; 70 G; 82 T; 0 U; 0 Other;

ö Length 601; 2; Indels Score 14.8; DB 6; Pred. No. 7.5e+02; Mismatches . 0 82.2%; 88.9%; Local Similarity 88.9 ses 16, Conservative Query Match Matches

18 1 CCACACCTATTCATACTC

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,402/c ABQ26402 standard; DNA; 601 RESULT

ABQ26402;

12-JUL-2002 (first entry)

Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis; drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism; SNP; cell differentiation; ds.

Oligonucleotide for detecting cytosine methylation SEQ ID NO 12993.

Homo sapiens

WO200218632-A2

07-MAR-2002.

01-SEP-2001; 2001WO-EP010074

01-SEP-2000; 2000DE-01043826. 05-SEP-2000; 2000DE-01044543.

(EPIG-) EPIGENOMICS AG

Guetig D; Berlin K, Olek A, Piepenbrock C,

Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of amplicons from chemically treated DNA.

Claim 12; 56pp + Sequence Listing; 56pp; German.

methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (1) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc. particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously, ABQ13410-ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in the disclosure of the invention This invention describes a novel method for determining the degree of

Sequence 601 BP; 82 A; 70 C; 266 G; 183 T; 0 U; 0 Other;

Gaps ö Length 601; Indels Score 14.8; DB 6; Pred. No. 7.5e+02; 0; Mismatches 2; ö 82.2%; 88.9%; Local Similarity 88.9 ses 16; Conservative Query Match Best Loc Matches

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in66f0 ak68h1 in67b1 im52h0 ak61f0 in66f0 ing90h0 ak56a0	BG442111 1449b01.y AA835294 ak66b09.x CK802774 in68e07.x A1985509 wk08011.x AA84455 ak59b12.s B0631720 i121c12.y BU949263 in68e07.x BU952425 io74d05.x AW583679 ia03a06.y BU949426 in67b10.y BU952506 io75d05.x BR047053 Ag55905.x BR047053 Ag55905.x BR047053 Ag55905.x BR0481518 ix15e08.x BU351064 io75d05.y AA835293 ak66099.s BQ101169 ij24h05.y AA835293 ak66099.s	alo 140 de la composición del composición de la composición de la composición del composición de la co	BESSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
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GenCore version 5.1.8 (c) 1993 - 2006 Biocceleration Ltd. c 25 c 26 using sw model c 18:53:06; Search time 3760 Seconds (without alignments) c 23:991 Million cell updates/sec	c 18 1.0 3541228 residues 36n parameters: 82156650 6 4 6 4 6 8 6 7 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7	results predicted by chance to have a of the total score distribution. SUMMARIES ID Description	AA921407
G Copyright (c OM nucleic - nucleic search, u Run on: May 10, 2006,	Title: Perfect score: 18 Sequence: 1 ccacacctatcatact Scoring table: IDENTITY NUC Gapop 10.0 , Gapext Searched: 41078325 seqs, 2339 Total number of hits satisfying cho Minimum DB seq length: 0 Maximum DB seq length: 0 Maximum DB seq length: 0 Maximum Match 1008 Post-processing: Minimum Match 1008 Listing first 150	Database : EST:* 1: 9D_est1:* 2: 9D_est2:* 3: 9D_est3:* 4: 9D_htc:* 5: 9D_est5:* 7: 9D_est5:* 8: 9D_est7:* 9: 9D_est3:* 11: 9D_9ss3:* 11: 9D_9ss3:* 8: 0D_est2:* 11: 9D_9ss3:* 8: 0D_est2:* 8: 0D_est2:* 8: 0D_est3:* 8: 0D_est3:	C 2 1 18 100.0 263 C 3 18 100.0 267 C 4 18 100.0 287 C 5 18 100.0 287 C 6 18 100.0 289 C 7 18 100.0 339 C 8 18 100.0 349 C 11 18 100.0 355 C 13 18 100.0 369 C 13 18 100.0 369 C 14 18 100.0 405 C 18 18 100.0 405 C 18 18 100.0 405 C 18 18 100.0 423 C 2 1 18 100.0 423 C 2 1 18 100.0 423 C 2 1 18 100.0 443 C 2 1 18 100.0 443 C 2 1 18 100.0 443

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Tumor Gene Index

Unpublished (1997)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Chris Moskaluk, M.D., Ph.D., Michael R.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Chris Moskaluk, M.D., Ph.D., Michael R.

Emmert-Buck, M.D., Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

DNA Sequencing by: Mashington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:

info@image.llnl.gov
Seq primer: -40UP from Gibco

High quality sequence stop: 231.
Hominidae, Homo.

1 (bases 1 to 263)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                        1. .263
/organism="Homo sapiens"
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                                                                                                                                                                                                                                                                                                                                          Conservative
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Matches 18; Conserv
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KEYWORDS
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                                                                                                                                                                                                         CL067667 CH216-111
CF684468 CCAFB33TO
CL069301 CH216-19L
CL069301 CH216-116
AK082210 Mus muscu
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CD924872 G750.115A
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B175080 Ta01 02g0
B175080 Ta01 02g0
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CF699771 CCAFV39TO
CZ703992 OC BA002
CZ703992 CC CAGF21F
CL485816 SAIL 424
CF683496 CCAGI4ITF
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CC526286 CH240 400
CR079365 Reverse s
AG426024 Mus muscu
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AJ814401 AJ814401
DR740046 FGASO8497
CC228072 CH261-123
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CD482289 atr01-6ms
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CF695153 CCAH183TF
           CL590838 OB Ba009
CL568481 OB Ba004
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C13544 C13544 Yuji
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AU247639 AU247639
BF359883 RC2-MT006
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BP687159 BP687159
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                         BB382955
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CF683496
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BF359883
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AA921407 267 bp mRNA linear EST 20-APR-1998 ak56h08.sl Barstead pancreas HPLRB1 Homo sapiens CDNA clone IMAGE1.411935 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR AA921407; mRNA sequence.
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40ml3 fwd. ET from Amersham.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae; Homo.

1 (bases 1 to 267)

1 (bases 1 to 267)

1 Hillier, L. Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Unpublished (1997)

Contact: Wilson RK
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                           Length 263;
                                                                                                                                                                                                                                               100.0%; Score 18; DB 1; Length 26.
100.0%; Pred. No. 1.86+02;
. w.cmarches 0; Indels
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;

sapiens (human)

Homo

Homo sapiens

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us-10-608-296-38.rst

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Mammatata, butterian, bustconcognition, remarks, reconstruction, mammatata, butterian, bustconcognition, read adams, M.D., Karlavage, A.R., Fleischmann, R.D., Fuldner, R.A., Bult, C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C., Cliac, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D., Fitzgerald, L.M., Fitzbugh, W.M., Fritzhman, J.L., Geoghagen, N.S., Glodek, A., Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P. S.Jr., Kelley, J.M., Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M., Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M., Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shirley, R., Bednarik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J., Dimke, D., Fergy, D.-F., Ferrie, A., Fischer, C., Hastings, G.A., Kozak, D.L., Kunsch, C., Hungjun, J., Li, H., Meisener, P.S., Olsen, H., Raymond, L., Wei, Y.F., Wing, J., Li, H., Meisener, P.S., Olsen, H., Fraser, C.M. and Venter, J.C.

Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of CDNA sequence
3']; double-stranded cDNA was ligated to Eco RI adaptors [AATTCGGATCCTTG], digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library constructed by Bob Barstead. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 21-APR-1997
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/clone lib="Pancreas tumor III"
/note="Organ: pancreas; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: XhoI"
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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EST77396 Pancreas tumor III Homo sapiens cDNA 5' end similar to
phospholipase A2 (GB:M21054), mRNA sequence.
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                                                                                                                                                            Length 270;
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9712 Medical Center Drive, Rockville, MD 20850 USA
Tel: 3018699056
                                                                                                                                                                                                                   0; Indels
                                                                                                                                                               100.0%; Score 18; DB 1; I
100.0%; Pred. No. 1.8e+02;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                      262 ccacaccrarrcaracrc 245
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                                                                                                                                                                                                                                                                     1 CCACACCTATTCATACTC 18
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Contact: Kerlavage, AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA366418.1 GI:2018768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 18; Conservative
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AA366418
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                                                                                                                                                                                     /clome_lib="Barstead pancreas HPLRB1"
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with a modified polylinker; Site_1: ECRRI; Site_2: NotI;
lst strand cDNA was primed with a Not I - oligo(dT) primer
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with a modified polylinker; Site_1: EcoRI; Site_2: NotI;
lst strand cDNA was primed with a Not I - oligo(dT) primer
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Mammalia, Butheria, Euarchontoglires, Primates, Catarrhini,
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1 (Asaes 1 to 270)

Hiller, L. Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40m13 fwd. ET from Amersham.
Location/Qualifiers
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 18; DB 1; Length 267; 100.0%; Pred. No. 1.8e+02; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="adult, 34 years"
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                                                                               clone="IMAGE:1411935"
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                                                                                                             'sex="female"
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Contact: Wilson RK
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Nielean, R., Bustamante, C., Clark, A.G., Glanowski, S., Sackton, T.B., Nielean, R., Bustamante, C., Clark, A.G., Glanowski, S., Sackton, T.B., Hubisz, M.J., Fladeel-Alon, A., Tanenbaum, D.M., Civello, D., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submission Submitted (05-WAY-2005) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment. Translation starts at the beginning of
                                                                                                                                                                                              Hominidae, Homo.

1 (bases 1 to 309)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski,S., Sackton,T.B.
Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Civello,D.,
White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
A Scan for Positively Selected Genes in the Genomes of Humans and
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                              Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Op63403.s1 Soares NFL_T_GBC_S1 Homo sapiens CDNA clone
IMAGE:1581509 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae, Homo.
1 (bases 1 to 330)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 2522 Std Error: 0.00
Seq primer: -40ml3 fwd. ET from Amersham.
Homo sapiens PLA2G1B gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 309;
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100.0%; Pred. No. 1.8e+02;
cive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                        (er) PLoS Biol. 3 (6), E170 (2005)
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Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="PLA2G1B"
/locus_tag="HC15100"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
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                                genomic survey sequence.
                                                    DQ047208
DQ047208.1 GI:66900407
GSS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Barstead pancreas HPLRB1"
hote="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia)
hith a modified polylinker; Site_l: EcoRI; Site_2: NotI;
et strand cDNA was primed with a Not I - oligo(dT) primer
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                       AR57e12.81 Barstead pancreas HPLRB1 Homo sapiens CDNA clone IMAGE:1412014 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40mls Fr from Amersham.
Location/Qualifiers
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1 (bases 1 to 289)

##iller, I. Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Unpublished (1997)

Contact: Wilson RK
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
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                                     Length 287;
                                                                             0; Indels
                                100.0%; Score 18; DB 1; I 100.0%; Pred. No. 1.8e+02; Attive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="adult, 34 years"
/lab_host="DH10B"
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/db_xref="taxon:9606"
/clone="IMAGE:1412014"
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                                                                                                                                                      261 CCACACCTATTCATACTC 278
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                  18; Conservative
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                                     Query Match
Best Local Similarity
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Bource

FEATURES

KEYWORDS SOURCE ORGANISM

TITLE JOURNAL COMMENT

REFERENCE AUTHORS

ACCESSION VERSION

AA844966/c DEFINITION

Matches

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EST 07-JUL-1998

GSS 02-JUN-2005

linear

DNA

309 bp

DQ047208

RESULT 6 DQ047208 LOCUS

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ORIGIN

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Gaps

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/tissue_type="Purified pancreatic islet"
/lab host="Duling"
/clone_lib="HR85 islet"
/clone_lib="HR85 islet"
/note="Organ: Pancreas; Vector: pBluescript SK(-); Site_l:
/note="Organ: Pancreas; Vector: pBluescript SK(-); Site_l:
Not!; Site_2: XhoI; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size ~lkb. 5'
XhoI site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, Enail: hinou@@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Honinidae; Homo.
I bases 1 to 352)
Harrington, J.J., Sherf, B., Rundlett, S., Jackson, P.D., Perry, R.,
Cain, S., Leventhall, C., Thornton, M., Ramechandran, R.,
Mhitington, J., Lerner, L., Costanzo, D., McElligott, K., Boozer, S.,
Mays, R., Smith, E., Veloso, N., Klika, A., Hess, J., Cothren, K., Lo, K.,
Offenbacher, J., Danzig, J. and Ducar, M.
Creation of gene expression
activation of gene expression
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RST11340 Athersys RAGE Library Homo sapiens cDNA, mRNA sequence.
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/clone lib="Athersys RAGE Library"
/clone="See 'Creation of Genome-wide Protein Expression
Libraries using Random Activation of Gene Expression',
Nature Biotechnology, in press. Note that even though the
cell type indicated is HT1080, since a random activation
method was used, these sequence tags are not necessarily
expressed in HT1080 under normal circumstances."
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Fax: 216 361 9596
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100.0%; Pred. No. 1.8e+02;
iive 0; Mismatches 0;
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100.0%; Pred. No. 1.8e+02;
iive 0; Mismatches 0;
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Location/Qualifiers
  /clone="IMAGE:5085640"
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BG192232.1 GI:13713919
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11329013
Contact: Scott J. Cain
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Matches 18; Conservative
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                                                                                                                                                                                   /clone lib="Soares NFL T GBC_S1"
/clone lib="Soares NFL T GBC_S1"
/note="Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCI CGAP GCBI) were mixed, and so circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 297480-302087, 682632-687239, 726408-728711, and 729096-731339. Subtraction by Bento Soares and M. Fatima Bonaldo. "
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349 bp mRNA linear EST 11-MAR-2005 id98b09.x1 HR85 islet Homo sapiens CDNA clone IMAGE:5085640 3' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 FRECURSOR;, mRNA
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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
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Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40UP from Gibco.
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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I bases 1 to 349)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scarce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium
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Coher Ests: id98009.y1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
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                                                    organism="Homo sapiens"
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                                                                                                                                     /clone="IMAGE:1581509"
/lab_host="DH10B"
                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
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/db_xref="taxon:9606"
Location/Qualifiers
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BI791451.1 GI:15819176
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ACCESSION

VERSION KEYWORDS

SOURCE ORGANISM

REFERENCE

AUTHORS

TITLE JOURNAL

COMMENT

FEATURES

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/USB ALTER = "MENDA"
/ MD xref="taxon:9606"
/ Clone="INAGE:6126153"
/ Clone="INAGE:6126153"
/ Clone="INAGE:6126153"
/ Lissue type="Purified pancreatic islet"
/ Lab_host="DH10B"
/ Clone="DH20B"
/ Clone="DH20B"
/ Clone="DH20B"
/ Clone="DH20B"
/ Clone="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
/ Not1; Site_2: XhoI; CDNA made by oligo-dT priming.
/ Size-selected on agarose gel. Average insert size ~1kb. 5'
/ Size-selected on agarose gel. Average insert size ~1kb. 5'
/ Size-selected on agarose gel. Average insert size ~1kb. 5'
/ Shol site was destroyed after directional cloning.
/ Amplified once. Contact information: Hiroshi Inoue, MD,
/ Metabolism Div. (Alan Permutt Lab), Washington University
/ School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110; E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
        EST 11-0CT-2002
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369 bp mRNA linear EST 11-OCT-2002 inS6g05.yl HR85 islet Homo sapiens cDNA clone IMAGE:6126153 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Library was constructed by Dr. Hiroshi Inoue DNA sequencing on seafington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40RP from Gibco
High quality sequence stop: 257.
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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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(bases 1 to 369)

Melton, D., Brown, S., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,

Melton, D., Brown, S., Kenty, G., Permutt, A., Gradwohl, G., Clifton, S.,

Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,

Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,

Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,

Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium
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Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
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100.0%; Pred. No. 1.8e+02;
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/organism="Homo sapiens"
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BU786585.1 GI:23833402
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BX113838.1 GI:27879441
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Matches 18; Conservative
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Tel: 617-495-1812
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                                                                                                                                     sequence.
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/db_txefe"taxon:9606"
/clone='IMAGE:6609758"
/tissue_type="Purified pancreatic islet"
/tab_host="DH108"
/clone_lib="HR85 islet"
/clone_lib="Hr86 islet"
/cl
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                                                                                                                                                                                                                                                      EST 20-DEC-2002
                                                                                                                                                                                                                                                                                   ir83a11.y1 HR85 islet Homo sapiens cDNA clone IMAGE:6608758 5'
similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae, Homo.

I (bases 1 to 356)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Lemishka, I., Scearce, M., Pare, D., Wylle, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbons, M., McCann, R., Cole, R., Taagareishvili, R.,
Miliama, T., Jackson, Y. and Bowers, Y.
Endocrine Pancreas Consortium
Unpublished (2000)
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                      356 bp
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Putative full length read
vector to vector length is 357
Seg primer: -40UP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95 CCACACCTATTCATACTC 112
                CCACACCTATTCATACTC 105
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Best Local Similarity 100.0%;
Matches 18; Conservative (
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Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
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405 bp mRNA linear EST 30-DEC-2002 ir83a12.x1 HR85 islet Homo sapiens CDNA clone IMAGE:6608760 3' similar to SW:FA21_HUWAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                  Unpublished (2000)
Other ESTs: ir83a11.y1
Other Douglas Melcon, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wastl.edu)
Seq primer: -40RP from Gibco.
Location/Qualifiers
Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.
Endocrine Pancreas Consortium
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases 1 to 405)

Welton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwoll, G., Clifton, S.,
Hillier, L., Marra, M., Pape, D., Wylle, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Kitcer, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbone, M., McCann, R., Cole, R., Tsagareishvili, R.,
Williams, T., Jackson, Y. and Bowers, Y.
Unpublished (2000)
Other_ESTs: ir83a12.y1
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100.0%; Pred. No. 1.8e+02;
iive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249 CCACACCTATTCATACTC 232
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CA943649
CA943649.1 GI:27432129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 18; Conservative
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CA943649/c
LOCUS
DEFINITION
                                                                                                                                                       TITLE
JOURNAL
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KEYWORDS
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/clone 12b="Soares NPL T GBC_S1"
/note="Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site 1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCI CGAP GCB1) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 297480-302087, 682632-687239, 726408-728711, and 722096-731339. Subtraction by Bento Soares and M. Fatima Bonaldo. "
                                                                                                                                   E Tobases 1 to 380)

S Ebert, L., Heil, O., Hennig, S., Neubert, P., Partsch, E., Peters, M., Radeloff, U., Schneider, D. and Korn, B.
Ruman Unigeneset - RZPD3

Unpublished (2003)
Contact: Tha Rolfs
Contact: Tha Rolfs
RZPD Deutsches Resourcenzentrum fuer Genomforschung GmbH
Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
RZPD IMAGED SEC. CDMA Clone Collection;
Human Unigeneset - RZPD3 (RZPDLIB No.972)
http://www.rzpd.de/CloneCards/Cgi-
bin/showLib.pl.cgi/response?libNo-972 Contact: Ina Rolfs
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Heubnerweg 6, D-14059 Berlin, Germany
Fax: +49 30 32639 101

www.rzpd.de
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This clone is available royalty-free from RZPD; contact RZDD (clone@rzpd.de) for further information. Seq primer: M13r, Primer sequence: TTTCACACAGGAAACAGCTATGAC. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
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100.0%; Pred. No. 1.8e+02;
ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
| Da_xref="teaxon:9606"
| clone="IMAGP99E093695 ; IMAGE:1461104"
| lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                                            Hominidae; Homo.
       Homo sapiens
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LOCUS
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AUTHORS
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SOURCE
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/mol_type="mRNA"
/mol_type="mRNA"
/db xref="taxon:9606"
/clone="IMAGE:508540"
/lab host="DHJUB"
/clone lib="HR85 islet"
/clone
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Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Trace considered overall poor quality
Seq primer: -40RP from Gibco
High quality sequence stop: 1.
Location/Qualifiers
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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
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Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Putative full length read
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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I (Dases 1 to 416)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,

Lemishka, I., Scearce, M., Breetelli, J., Gradwohl, G., Clifton, S.,

Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,

Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,

Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,

Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancress Consortium
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Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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100.0%; Pred. No. 1.8e+02;
ive 0; Mismatches 0; Indels
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/organism="Homo sapiens"
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CA867923.1 GI:27319472
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Matches 18; Conservative
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/ word_type="mRNA"
/ db _xref="taxon:9606"
/ clone="inAMS:608760"
/ tissue type="Purified pancreatic islet"
/ lab_host="bH108"
/ clone lib="HR85 islet"
/ clone lib="HR85 islet"
/ note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
/ note="Organ: Pancreas; Vector: pBluescript Size-selected on agarose gel. Average insert size -1kb. 5'
/ size-selected on agarose gel. Average insert size -1kb. 5'
/ shouls ite was destroyed after directional cloning.
/ Amplified once. Contact information: Hiroshi Inoue, MD,
/ Metabolism Div. (Alan Permutt Lab), Washington University
/ School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
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                                                      Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                               Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
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Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40RP from Gibco.
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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I (bases 1 to 409)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Lemishka, I., Marran, M., Pape, D., Wylle, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
Budocrine Pancreas Consortium
Unpublished (2000)
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Endocrine Pancreas Consortium
                Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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Fax: 617-495-8557
Email: dmelton@biohp.harvard.edu
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                                                                                                                                                                                                                           Tel: 617-495-1812
Fax: 617-495-8557
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Unpublished (1997)
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                                                                                                                         / Mol type="mrkNA"
/ db xref="taxon:9606"
/ clone="INAGE:6608760"
/ tlssue type="burified pancreatic islet"
/ lab_host="hbH10B"
/ clone=lbb="HR85 islet"
/ lab_host="bH10B"
/ clone=lbb="HR85 islet"
/ note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
/ note="Organ: pBring sk(-); Site_1:
/ note="O
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Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Putative full length read
vector to vector length is 470
Seq primer: -40RP from Gibco.
Location/Qualifiers
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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases 1 to 423)
Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Gardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R.,
Williams,T., Jackson,Y. and Bowers,Y.
Endocrine Pancreas Consortium
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Other_ESTs: in68e07.x1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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                                                                                                   organism="Homo sapiens"
r: -40UP from Gibco.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 617-495-8557
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Seq primer:
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                                                                             source
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/db xref="laxxon:9606"
/db xref="laxxon:9606"
/dlone="IMAGB:2717913"
/lab_host="NHIDB (Life Technologies)"
/clone lib="NCI CGAP Sub3"
/clone lib="NCI CGAP Sub3"
/clone lib="NCI CGAP Sub3"
/note="Vector: pT773D-Pac (Pharmacia) with a modified
polylinker; Site l: NOT I; Site 2: BCO RI; The
NCI CGAP Sub3 library is a subtracted library derived from BI. BI constitutes a mixture of 21
normalized or subtracted NCI CGAP libraries:
NCI CGAP Cot, NCI CGAP Pr22, NCI CGAP Pr28, NCI CGAP Col0,
NCI CGAP Cot6, NCI CGAP Kid5, NCI CGAP Pr28, NCI CGAP Library NCI CGAP Exid1, NCI CGAP Librar,
NCI CGAP Exid NCI CGAP Kid5, NCI CGAP Librar,
NCI CGAP Exid NCI CGAP Kid5, NCI CGAP Librar,
NCI CGAP Br23, NCI CGAP Lu5, NCI CGAP Lu24,
                                                                                                                                   Note:—Torgan: Pancreas, Vector: pBluescript SK(-); Site_1:
Not! Site_2: Xho!: CDNA made by oligo-dT priming.
Size-selected on agarses egle. Average insert size -1kb. 5'
Xho! site was destroyed after directions cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

The sequence contained an oligo-dT track that was present in the oligonuclectide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. cDNA Library Preparation: M.B. Soares Lab Clone distribution information can be found through the I.M.A.G.E. Consortium/Library information can be found through the www-bio.llnl.gov/bbrp/image/image.html
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;
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1 (bases 1 to 425)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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UI-H-BI1-adr-h-03-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone
IMAGE:2717813 3', mRNA sequence.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 423;
/clone="IMAGE:6127213"
/tissue type="Purified pancreatic islet"
/lab host="DH10B"
/clone_lib="HR85 islet"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 18; DB 5; I 100.0%; Pred. No. 1.8e+02;
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/mol_type="mRNA"
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Homo sapiens
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BQ100865/c
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NCI CGAP Lu19, NCI CGAP GC4, NCI CGAP GC6,

NCI_CGAP_Brn25. These 21 libraries were pooled and a single-stranded DNA preparation of the resulting mixture was used as a tracer in a subtractive hybridization with a driver whose composition is detailed below:

NCI CGAP Kid3 pool 1 LLAM 334-337, 3682-3683, 3798-3803 (IMAGE CloneIDS 1322376-132391, 1456008-1456775, 1500552-1502855); NCI CGAP Kid5 pool 1 LLAM 338-3342, 3722-3725, 3776-3778 (IMAGE CloneIDS 132912-1325831, 1471368-1472903, 1492104-1492255); NCI CGAP Lu5 pool 1 LLAM 3575-3882, 3861-3864 (IMAGE CloneIDS 14920-1417991, 1520604-1252439); NCI CGAP GC4 pool 1 LLAM 3164-3167, 3716-3720, 3733-3735 (IMAGE CloneIDS 1257096-1258631, 1469064-1470983, 1475592-147674); NCI CGAP Proposition Section Secti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ271823 426 bp mRNA linear EST 15-JUL-2003 ik15a01.yl HR85 islet Homo sapiens cDNA clone IMAGE:5781000 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Putative full length read
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Hominidae, Homo.

Homology, December 1 to 426)

Helton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Leemishka, I., Scaerce, M., Brestelli, J., Gradwohl, G., Clifton, S., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., McCann, R., Cole, R., Tsagareishvill, R., Williams, T., Jackson, Y. and Bowers, Y. Cole, R., Tsagareishvill, R., Unpublished (2000)

Other_ESTS: ik15a01.x1
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BQ271823.1 GI:20496890
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I (bases 1 to 442)

S Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,

Melton,D., Brown,J., Breetelli,J., Gradwohl,G., Clifton,S.,

Hiller,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,

Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,

Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R.,

Williams,T., Jackson,Y. and Bowers,Y.

Endocrine Pancreas Consortium

Unpublished (2000)

Other ESTS: ij24h05.yl

Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue

Endocrine Pancreas Consortium
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ij24h05.x1 Melton Normalized Human Islet 4 N4-HIS 1 Homo sapiens
cDNA clone IMAGE:6135800 3' similar to SW:PA21_HUMAN P04054
PHOSPHOLIPASE A2 PRECURSOR ;, mRNA sequence.
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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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mail: demelcombblobp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Library was constructed by Dr. Douglas Melton DNA sequencing washington University Genome Sequencing Center This clone is
Washington University Genome Sequencing Center This clone is
washington University Genome Sequencing Center This clone is
consortium (info@image llnl.gov) for further information
Trace considered overall poor quality
Seq primer: -400p from Gibco
High quality sequence stop: 1.
Location/Qualifiers
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100.0%; Pred. No. 1.8e+02;
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vector to vector length is 465
Seg primer: -40RP from Gibco
High quality sequence stop: 403.
Location/Qualifiers
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BQ100865.1 GI:20133849
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/clone="IMAGE:5942102"
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Best Local Similarity 100.0
Matches 18; Conservative
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                                                                                                                                                      /dev stage="Adult"
//lab_host="DH10B"
//lab_host="DH10B"
//lab_host="DH10B"
//cloon=lib="Whelton Normalized Human Islet 4 N4-HIS 1"
//cloon=lib="Whelton Normalized Human Islet 4 N4-HIS 1"
//note="Organ: Pancreas; Vector: pSPORT1; Site 1: Not 1;
Site 2: Sal 1; Starting library constructed using
SuperScript Plasmid Library kit (Life Technologies). CDNA
made by oligo-dT priming. Size-selected by column
fractionation; average insert size 1.08 kb. Library was
amplified once on solid support and plasmid DNA from
library was prepared. The library DNA was normalized by
method # from Bonaldo, Lennon, and Soares 1996 Genome
Research 6:791-806; 0.5 microgram single-stranded library
plasmid DNA was mixed with 5 micrograms PCR product
representing library inserts and hybridized to an Ecot of
20. Single-stranded (unhybridized) plasmids were isolated
by hydroxyapatite chromatography and used to make this
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue abdocrine Pancreas Consortium Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Library was constructed by Dr. Hiroshi Inque DNA sequencing by: Washington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini;
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Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Hemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Hillier, L., Marra, M., Pape, D., Wylle, T., Martin, J. Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Gradenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
Milliams, T., Jackson, Y. and Bowers, Y.
Endocrine Pancreas Consortium
Unpublished (2000)
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                                                                                                                                  'tissue_type="Islets of Langerhans"
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'organism="Homo sapiens"
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                                                     /db_xref="taxon:9606"
/clone="IMAGE:6135800"
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Putative full length read
vector to vector length is 463
Seq primer: -40RP from Gibco
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                                                                                                              /sex="Both"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           library."
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JOURNAL
COMMENT
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AUTHORS
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KEYWORDS
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/clone_lib="HR85 islet"
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ii17e08.yl Melton Amplified Mouse E16 5 Pancreas 3 M1651 A Mus musculus cDNA clone IMAGE:5942102 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA sequence.
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Endocrine Pancreas Consortium
Barvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Crániata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
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Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Hillier, L., Marra, M., Pape, D., Wylle, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Williams, T., Jackson, Y. and Bowers, Y. Cole, R., Tsagareishvili, R.,
Endocrine Pancreas Consortium
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Email: dmelton@blohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Library was constructed by Dr. Douglas Melton Dr. Washington University Genome Sequencing Center This clone is available royalty-free through LLNL; please contact the IMAGE consortium (info@image.llnl.gov) for further information Putative full length read
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/tissue_type="Purified pancreatic islet"
/lab_host="DH10B"
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100.0%; Pred. No. 1.8e+02;
ive 0; Mismatches 0;
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/db_xref="taxon:10090"
                                                                                                                                                                          /mol_type="mRNA"
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Seg primer: -40RP from Gibco.
Location/Qualifiers
ocation/Qualifiers
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BQ126651.1 GI:20200562
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us-10-608-296-38.rst

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Hominidae, Homo.

Is (bases 1 to 449)

S. Hiller, L. Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, T., Walterston, R. and Wilson, R. Washu-NcI human EST Project

Unpublished (1997)

Contact: Wilson RK
Washington University School of Medicine
4444 Forcest Park Parkway, Box 8501, St. Louis, MO 63108

Tel: 314 286 1810

Fax: 314 286 1810

Fax: 314 286 1810

Fax: 314 286 1810

Fax: Infa@inage.llnl.gov) for further information.

This clone is available royalty-free through LLNL; contact the IMAGE Consortium (infa@inage.llnl.gov) for further information.

Trace considered overall poor quality Seq primer: -40m13 fwd. ET from Amersham

High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="adult, 34 years"
/lab_host="DH10B"
/clone lib="Barstead pancreas HPLRB1"
/note="Cygan: pancreas; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site 1: EcoR1; Site 2: Not1;
lst strand cDNA was primed with a Not I - oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 23-FEB-1998
Amplified once. Contact information: Hiroshi Inoue, MD, Metabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Box 8127, 660 South Euclid Ave., St. Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel: 314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ak68h10.s1 Barstead pancreas HPLRB1 Homo sapiens cDNA clone IMAGE:1413091 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                           Length 448;
                                                                                                                                                                                                                                                        100.0%; Score 18; DB 5; Length 44
100.0%; Pred. No. 1.9e+02;
ive 0; Mismatches 0; Indels
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100.0%; Pred. No. 1.9e+02;
cive 0; Mismatches 0;
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1413091"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248 CCACACCTATTCATACTC 231
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AA835575.1 GI:2909303
EST.
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Homo sapiens
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Best Local Similarity 100.
Matches 18; Conservative
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Best Local Similarity
Matches 18; Conserv
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AA835575/c
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JOURNAL
COMMENT
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AUTHORS
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KEYWORDS
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/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="InAGE:6127237"
/tissue_type="Purified pancreatic islet"
/lab_host="DH10B"
/clone="Drogan: Pancreas; Vector: pBluescript SK(-); Site_1:
/note="Organ: Pancreas; Vector: pBluescript sk(-); Site_1:
/note="Organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BU949152 BST 21-OCT-2002 in66f07.x1 HR85 islet Homo sapiens cDNA clone IMAGE:6127237 3' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                                                           /note="Vector: pSPORT1; Site_1: Not 1; Site_2: Sal 1; Library constructed using SuperScript Plasmid Library kit (Life Technologies). cDNA made by oligo-dT priming. Size-selected by column fractionation; average insert size 0.97 kb. Amplified once on solid support. cDNA Library Preparation: Guolin Chen."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                         /clone_lib="Melton Amplified Mouse E16 5 Pancreas 3 M16S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (2000)
Other ESTS: in66f07,y1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: 617-495-8557
Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40UP_from Gibco.
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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1 (bases 1 to 448)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,

Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,

Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,

Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,

Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,

Williamm, T., Jackson, Y. and Bowers, Y.

Endocrine Pencreas Consortium
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                                                   /tissue_type="pancreas"
/dev_stage="Embryonic day E16.5"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .448
/organism="Homo sapiens"
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BU949152.1 GI:24200503
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
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DEFINITION

ACCESSION VERSION KEYWORDS SOURCE

BU949187/c

8 a ORGANISM

REFERENCE AUTHORS TITLE JOURNAL COMMENT

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/Action lib="MR85 islet"
//clohe lib="MR85 islet"
//note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
//note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
// Size_selected on agarose gel. Average insert size -lkb. 5.
// XhoI site was destroyed after directional cloning.
// Amplified once. Contact information: Hiroshi Inoue, MD,
// Metabolism Div. (Alan Permutt Lab), Washington University
// School of Medicine, Box 8127, 660 South Euclid Ave., St.
// Louis, MO 63110, E-mail: hinoue@ingate.wustl.edu, Tel:
// 314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 04-MAR-1998
im52h05.x1 HR85 islet Homo sapiens cDNA clone IMAGE:6039008 3'
similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 617-495-1812
Fax: 617-495-857
Email: dmelton@blobp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                          Hominidae; Homo.

I (bases 1 to 455)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theishing, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium
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ak61f09.s1 Barstead pancreas HPLRB1 Homo sapiens cDNA clone
IMAGE:1412393 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR
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/mol_type="mRNA"
/db_xref="teaxon:9606"
/db_xref="IMAGE:6039008"
/tissue_type="Purified pancreatic islet"
/lab_host="DH108"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (hinoue@im.wustl.edu)
Seg primer: -40UP from Gibco.
Location/Qualifiers
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BU075990
BU075990.1 GI:22517179
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Homo sapiens
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Homo sapiens
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Best Local Similarity
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                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                ACCESSION
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                                                                                                                                                                                                                                                             BU949187 11-0CT-2002 in67b10.x1 HR85 islet Homo sapiens cDNa clone IMAGE:6127074 3' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fax: 617-495-8557
Bamal: dimelton@blab.obp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40UP from Gibco.
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases 1 to 449)

Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,

Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,

Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,

Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,

Williams,T., Jackson,Y. and Bowers,Y.

Milliams,T., Jackson,Y. and Bowers,Y.
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Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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/mol_type="mRNA"
/db_xref="taxon:9606"
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   18
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1 CCACACCTATTCATACTC
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Matches 18; Conservative
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RESULT 26 BU075990/c LOCUS

Query Match

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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
   Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Budocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                       Email: dmelton@blohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Putative full length read
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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(bases 1 to 465)

Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Cardenas,M., Gibbons,M., McCann,R., Cole,R., Taagareishvili,R.,
Williams,T., Jackson,Y. and Bowers,Y.
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H. Kaestner, & Hiroshi Inoue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
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Seg primer: -40RP from Gibco.
Location/Qualifiers
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BM504818.1 GI:18667671
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Best Local Similarity 100.
Matches 18; Conservative
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Fax: 617-495-8557
                                                                                                                                                                                                                                    Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .459
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BM504818/c
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           COMMENT
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/lab_host="DH10B"
/clone lib="Barstead pancreas HPLRB1"
/note="Corgan: pancreas; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site 1: EcoR1; Site 2: NotI;
lst strand cDNA was primed with a Not I - oligo(dt) primer
                                                                     Hominidae; Homo.

I (bases 1 to 459)

S Hiller,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S.,
Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M.,
Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F.,
Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
WashU-NCI human EST Project
Unpublished (1997)
Contact: Wilson RK
Washington University School of Medicine
A444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (infc@image.llnl.gov) for further information.
Seq primer: -40m13 fwd. ET from Amersham
High quality sequence stop: 377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BU949393 459 bp mRNA linear EST 21-OCT-2002 in66f07.yl HR85 islet Homo sapiens cDNA clone IMAGE:6127237 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases 1 to 459)

Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scarce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Williams,T., Jackson,Y. and Bowers,Y.
Endocrine Pancreas Consortium
Unpublished (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1412393"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 CCACACCTATTCATACTC 246
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BU949393.1 GI:24200744
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
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Query Match

ORIGIN

Matches

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RESULT 28

BU949393

ACCESSION

VERSION

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS TITLE JOURNAL

source

FEATURES

TITLE JOURNAL

COMMENT

REFERENCE AUTHORS ö

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Seg primer: -40RP from Gibco.
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AA921338/c
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JOURNAL
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                            FEATURES
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                                                                                                                                                                                                                                                                                                                                                 /clone lib="MR85 islet"
/clone lib="MR85 islet"
/note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
Not1; Site_2: Xho1; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size -lkb. 5'
Xho1 site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, Mn 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BU071991 466 bp mRNA linear EST 27-AUG-2002 im52h05.yl HR85 islet Homo sapiens cDNA clone IMAGE:6039008 5' similar to SW:PA21_HUWAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wastl.edu)
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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1 (bases 1 to 466)
Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Williams,T., Jackson,Y. and Bowers,Y.
Endocrine Pancreas Consortium
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Other ESTS: imS2NOS.x1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue Endocrine Pancreas Consortium
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                                                                                                                                                                                                                                                                                                      /tissue_type="Purified pancreatic islet"
/lab host="DH10B"
                                                                                                                                                                                                                          /organism="Homo sapiens"
                                                                                                 (hinoue@im.wustl.edu)
Seg primer: -40UP from Gibco
High quality sequence stop: 375.
Location/Qualifiers
                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606"
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Best Local Similarity 100.
Matches 18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
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VERSION
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Hominidae; Homo.

I (bases 1 to 474)

S Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. WashU-NCI human EST Project

U upublished (1997)

Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108

Tel: 314 286 1810

Fax: 314 286 1810

Fax: 314 286 1810

Fax: 314 286 1810

Fax: Machington Wustl.edu

This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.

Trace considered overall poor quality
Seg primer: -40mi3 fwd. ET from Amersham

High quality sequence stop: 1.

Location/Qualifiers
                                                                                                                                                                                                                        /clone_10b="HR85 islet"
/note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1:
Not1; Site_2: Xho1; DNA made by oligo-dr priming.
Size-selected on agarose gel. Average insert size -lkb. 5.
Xho1 site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@ingate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
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Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ak56a06.81 Barstead pancreas HPLRB1 Homo sapiens CDNA clone IMAGE:1411858 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone lib="Barstead pancreas HPLRB1"
/note="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                        0; Indels
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/lab_host="DH10B"
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                                    1. .466
/organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:1411858"
Location/Qualifiers
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EST 13-MAR-2002
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1 (bases 1 to 495)

Metachon,D., Meadows,A., Clifton,S., Hillier,L., Marra,M., Pape,D.,
Wylle,T. Blistain,A., Schmitt,A., Theising,B.,
Ritter,E., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M.,
McCann,R., Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: dmeltoneblohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu) This sequence now available from the IMAGE
consortium, for clone orders contact: info@image.llnl.gov
Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG142111 495 bp mRNA linear EST 13-MAR-20C ia49b01.yl Melton Human Islets HIZ1 Homo sapiens cDNA clone IMAGE:5641656 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2PECURSOR;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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/dev_stage="Adult"
/lab_host="TOP10"
/clone_lib="Welton Human Islets HIZ1"
/note="Organ: Pancreas; Vector: pZErO-2; Site_1: Not I;
Site_2: Xho I; Library constructed using SuperScript
Plasmid Library kit (Life Technologies). cDNA made by
oligo-dr priming: Xho I site destroyed during cloning.
Size-selected by column fractionation; average insert
size 1:59 kb. Primary library, unamplified."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
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                                                                                             Length 479;
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100.0%; Pred. No. 1.9e+02;
ive 0; Mismatches 0; Indels
                                                                                                                                                           0; Indels
                                                                                         100.0%; Score 18; DB 3; L
100.0%; Pred. No. 1.9e+02;
cive 0; Mismatches 0;
314-362-1916, Fax: 314-747-2692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WashU-Harvard Pancreas EST Project Unpublished (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seg primer: -40kP IIOm Caroot High quality sequence Stop: 458.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:5641656"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                          279 ccacaccrarrcaracre 296
                                                                                                                                                                                                                            1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG142111.1 GI:12645506
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'sex="Both"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .495
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                                                                                                                        Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG142111
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JOURNAL
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                                                                                                                            3'); double-stranded cDNA was ligated to Eco RI adaptors AATTCGGATCCTTG], digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library constructed by Bob Barstead.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: dmelron@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Putative full langth read
vector to vector I langth is 545
Seq primer: -40RP from Gibco.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                   1 (Mindea, Monto)
1 (Mindea, Mindea, Monto)
1 (Mindea, Monto)
1 (M
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242 CCACACCTATTCATACTC 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BMS05143.1 GI:18668167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                     18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                       Query Match
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SOURCE
ORGANISM
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JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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BM505143
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AUTHORS
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VERSION

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AA835294/c LOCUS DEFINITION

ACCESSION

VERSION KEYWORDS SOURCE

RESULT 34

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ORGANISM

REFERENCE AUTHORS TITLE JOURNAL COMMENT

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/mol_type="mRNA"
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/note="Organ: Pancreas; Vector islet"
/clone=loggan: Pancreas; Vector islet islet
/clone=loggan: Pancreas; Vector islet
/clone=loggan: Pancreas; Vector islet
/clone=loggan: Pancreas; Pancreas; Pancreas;
/clone=loggan: Pancreas; Pancreas;
/clone=loggan: Pancreas;
/clone=logga
                                                                                                                                                                                                                  Hominidae, Homo.

Hominidae, Homo.

Houses 1 to 496)

Melton, D., Meadows, A., Clifton, S., Hillier, L., Marra, M., Pape, D.,

Mylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B.,

Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M.,

McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This re-sequenced clone hits its original self but in the opposite direction. . ALLOWED TO PASS FOR MOUSE-PANCHEAS VERIFICATION Possible reversed clone: similarity on wrong strand Seq primer: -40RP from Gibco. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WashU-Harvard Pancreas EST Project
Unpublished (2000)
Other ESTs: in68e07.y1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A1985509 497 bp mRNA linear EST 31-AUG-199 ws08d11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2496597 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN);, mRNA
                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This read is a 3' RESEQUENCE of a previously sequenced pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 496;
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100.0%; Pred. No. 1.9e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233 CCACACCTATTCATACTC 250
           CK902774.1 GI:45364305
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                                                                                  Homo sapiens (human)
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nes 18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .496
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                                                                                                                    Homo sapiens
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AI985509/c
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AUTHORS
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           VERSION
                                                                              SOURCE
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hote="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site_1: EcoR1; Site_2: NoL1;
ist strand cDNA was primed with a Not I - oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3'); double-stranded cDNA was ligated to Eco RI adaptors AATTCGGATCCTG], digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library constructed by Bob Barstead.
                                                                                                                                                                                                                          EST 23-FEB-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hominidae, Homo.

I (bases 1 to 496)

Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schollenberg,K., Steptoe,M., Tan,F., Traising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. WashU-NCI human EST Project
Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Trace considered overall poor quality
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                          AAB35294 4865b10.s1 Barstead pancreas HPLRB1 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="adult, 34 years"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1412827"
268 CCACCCTATTCATACTC 285
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                                                                                                                                                                                                                                                                                                                                                                                                   AA835294.1 GI:2909022
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
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Matches 18; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence.
CK902774
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source

FEATURES

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Gaps

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EST 31-AUG-1999

Query Match

LOCUS DEFINITION

ACCESSION

RESULT 35

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CK902774

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/clone_lib="Barstead pancreas HPLRB1"
hote="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site 1: EcoR1; Site 2: NotI;
lst strand cDNA was primed with a Not I - oligo(dT) primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3'); double-stranded cDNA was ligated to Eco RI adaptors [AATTCGGATCCTTG], digested with Not I and cloned into the Not I and Eco RI sites of the moddfied pT7T3 vector. Library constructed by Bob Barstead.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1121012. VI HR85 islet Homo sapiens CDNA clone IMAGE:6030718 5' similar to SW:PA21 HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Library was constructed by Dr. Hiroshi Inque DNA sequencing by: Washington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inque (hinque@im.wustl.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae, Homo.

I (bases 1 to 517)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Lemishka, I., Martan, M., Pape, D., Wylle, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
Millama, T., Jackson, Y. and Bowers, Y.
Williams, T., Jackson, Y. and Bowers, Y.
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40ml3 fwd. ET from Amersham High quality sequence stop: 53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleo:
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 501;
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100.0%; Pred. No. 1.9e+02;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                        /dev_stage="adult, 34 years"
/lab_host="DH10B"
                                                                                                                                                                          /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:1412159"
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Email: dwelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517 bp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 CCACACCTATTCATACTC 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                       /sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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Best Local Similarity
Matches 18; Conserva
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JOURNAL
COMMENT
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KEYWORDS
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                                                                                                                         FEATURES
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I (Bases 1 to 501)

Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Washus, D. Indian EST Project
Unpublished (1997)

Contact: Wilson RK
Washington University School of Medicine
444 Porest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Pax: 314 286 1800
Eax: 314 286 1800
Eax: 314 286 1800
                                                                                                                                                                    Email: cgapbs-remail.nib.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
Www-bio.lnh.gov/bbrp/inage/image.html
Seq primer: -40UP from Gibco.
Seq primer: -40UP from Gibco.
High quality sequence stops: 386.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lb="NCI_CGAP_Kid11"
/note="Organ: Kidney; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site 1: Not I; Site 2: Eco RI; Plasmid DNA from the normalized library NCI_CGAP Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5.000 clones made from the same library (5010nelDs 1322376-1323911, 1456007-1456775, and Fatima Bonaldo. "Subtraction by Bento Soares and M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
     1 (bases 1 to 497)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ak59b12.sl Barstead pancreas HPLRB1 Homo sapiens CDNA clone IMAGE:1412159 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN); mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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0
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                                                                                      Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2496597"
/lab_host="DH10B"
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VERSION
KEYWORDS
SOURCE
ORGANISM
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AA844755/c
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DEFINITION
        REFERENCE
AUTHORS
TITLE
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JOURNAL
COMMENT
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                                                                                                                      JOURNAL
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                                                                                                                                                  COMMENT
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Gaps

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Gaps

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/clone_lib="HR85 islet"
/clone_loggan: Pancreas; Vector: pBluescript SK(-); Site_l:
Not1: Site_2: Xho1; cDNA made by oligo-dT priming.
Not1: Site_2: Xho1; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size ~1kb. 5'
Xho1 sitee was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD, Metabolism Div. (Alan Permut Lab), Washington University School of Medicine, Box 8127, 660 South Buclid Ave., St.
Louis, MO 63100, E-mail: hinoue@ingate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: Pancreas; Vector: pBluescript SK(-); Site_1: Orbit; Site_2: Xhoi, cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size ~1kb. 5'
Xhoi site was destroyed after directional cloning.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BU952425
io74d05.x1 HR85 islet Homo sapiens cDNA clone IMAGE:6112129 3'
similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryotta, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, Hominidae, Homo.

1 (Dases 1 to 520)

1 (Dases 1 to 520)

Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K., Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S., Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A., Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J., Williams,T., Jackson,Y. and Bowers,Y. Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and Bowers,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endocrine Pañcreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rel: 617-495-1812
Email: dmeltonobiohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
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Other_ESTs: io74d05.y1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 520;
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/tissue_type="Purified pancreatic islet"
/lab host="DH10B"
/clone_lib="HR85 islet"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 18; DB 5; I 100.0%; Pred. No. 1.9e+02; ive 0; Mismatches 0;
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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon.9606"
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High quality sequence stop: 361.
Location/Qualifiers
    /lab host="DH10B"
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Best Local Similarity
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BU952425/c
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JOURNAL
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                                                                                                                                                                                                   /clone="IMAGE:003718"
/tissue type="Purified pancreatic islet"
/lab_hote="Hunge"
/lab_hote="Hunge"
/clone lib="HR85 islet"
/clone lib="Hr885 islet"
/clon
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similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
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Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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I (bases 1 to 520)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theisling, B., Riter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Williams, T., Dackson, Y.

Williams, T., Jackson, Y.

Williams, T.

Williams, 
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/tissue_type="Purified pancreatic islet"
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                                                                                organism="Homo sapiens"
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High quality sequence stop: 464.
Location/Qualifiers
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/db_xref="taxon:9606"
                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
Location/Qualifiers
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Best Local Similarity 100.00
These 18; Conservative
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BU949263/c
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FEATURES
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Length 522

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Query Match 100.
Best Local Similarity 100.
Matches 18; Conservative
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Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                    sequence.
BU949426
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AUTHORS
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JOURNAL
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KEYWORDS
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Email: dimelton@biohp.harvard.edu
Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
For information on obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu)
Amplified once. Contact information: Hiroshi Inoue, MD, Metabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Box 8127, 660 South Euclid Ave., St. Louis, MO 63110, B-mail: hinoue@imgate.wustl.edu, Tel: 314-362-1916, Fax: 314-747-2692."
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1 (bases 1 to 522)

Melton, D., Meatdows, A., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (2000)
Other ESTs: ia03a06.x3
Contact: Douglas Melcon, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence now available from the IMAGE consortium, for clone orders contact: infoahmage.llnl.gov Seq primer: -40RP from Gibco High quality sequence stop: 397.
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                       4W583679 13-MAR-20 hg mRNA linear EST 13-MAR-20 ha03a06.yl Human Pancreatic Islets Homo sapiens CDNA clone IMAGE:5637202 5' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR
                                                                                                                                                                                              Gaps
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0
                                                                                                                                                   Query Match 100.0%; Score 18; DB 5; Length 520; Best Local Similarity 100.0%; Pred. No. 1.9e+02; Matches 18; Conservative 0; Mismatches 0; Indels
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1. .522
                                                                                                                                                                                                                                                              245 CCACACCTATTCATACTC 228
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                                                                                                                                                                                                                                                                                                                                               RESULT 41
AWS83679
LOCUS
DEFINITION
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SOURCE
ORGANISM
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VERSION
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JOURNAL
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/tissue_type="Purified pancreatic islet"
/lab_hofe="Unlug"
/lab_hofe="Unlug"
/clone_lib="HR85 islet"
/clone_lib="Corpan: Pancreas; Vector: pBluescript SK(-); Site_l:
NotI; Site_2: XhoI; CDNA made by oligo-dT priming -
Size-selected on agarcose gel. Average insert size -lkb. 5'
XhoI site was destroyed after directional cloning.
XhoI site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                           BU949426 11-OCT-2002 in67bl0.yl HR85 islet Homo sapiens CDNA clone IMAGE:6127074 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
vector to vector length read
vector to vector length is 524
Seq primer: -40RP from Gibco
High quality Sequence stop: 467.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae, Homo.

I (bases 1 to 52)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Breetelli, J., Gradwohl, G., Clifton, S.,
Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,
Schmitt, A., Theishing, B., Ritter, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
Williams, T., Jackson, Y. and Bowers, Y.
Endocrine Pancreas Consortium
Unpublished (2000)
Other ESTS: in67blo.x1

Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                        Gaps
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                                                                     0; Indels
100.0%; Score 18; DB 1; 100.0%; Pred. No. 1.9e+02; ive 0; Mismatches 0;
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100.0%; Pred. No. 1.9e+02;
iive 0; Mismatches 0;
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                                                                                                                                                                                                        282 CCACACCTATTCATACTC 299
                                                                                                                                          1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BU949426.1 GI:24200777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
Homo sapiens
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Best Local Similarity
Matches 18; Conserv
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RESULT 43 BU952506/c DEFINITION

셤

ORGANISM

REFERENCE

ACCESSION

VERSION KEYWORDS

TITLE JOURNAL

COMMENT

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Email: cgapbs-remail.nih.gov
Tissue Procurement: Chris Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CRAP clone distribution information
clone distribution: NCI-CRAP clone distribution information
info@Armage.llnl.gov
Seq primer: -40UP from Gloco
High quality sequence stopp: 417.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BQ126412 526 bp mRNA linear EST 19-APR-2002 iii.7060.x1 Melton Amplified Mouse Elf 5 Penarceas 3 M16S1 A Mus musculus cDNA clone IMAGE.5942102 3' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA sequence.
                       BE047053 525 bp mRNA linear EST 08-JUN-2000 hq55g05.xl NCI CGAP Pan3 Homo sapiens cDNA clone IMAGE:3123320 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN);, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_nost="DHIOB (phage-resistant)"
/clone lib="NCI CGAP Pan3"
/note="Organ: pancras; vector: pCMV-SPORT6; Site 1: NotI;
Site 2: Sal1; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Goirognath; Muroidea; Murinae; Mus.

1 (Dases 1 to 526)
Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hiller, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                        Hominidae; Homo.
1 (bases 1 to 525)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 525;
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100.0%; Pred. No. 1.9e+02;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3123320"
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BQ126412.1 GI:20200323
                                                                                                                                      BE047053
BE047053.1 GI:8364106
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                                                                                                                 sequence.
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BE047053/c
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Matches
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VERSION
KEYWORDS
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AUTHORS
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Not1; Site_2: XhoI; cDNA made by oligo-dT priming:
Size-selected on agarose gel. Average insert size -1kb. 5'
XhoI site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@ingate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                              EST 21-OCT-2002
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                                                                                                                                                                                                                      io75d05.x1 HR85 islet Homo sapiens cDNA clone IMAGE:6132152 3'
similar to SW:PA21 HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue Bandorine Pandresas Consortium Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
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Hominidae, Homo.

Hominidae, Homo.

Holton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scarce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylle, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Endocrine Pancreas Consortium

Unpublished (2000)

Other_ESTS: 1075405.y1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                           linear
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/clone_lib="HR85 islet"
                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (hinoue@im.wustl.edu)
Seg primer: -40UP from Gibco
High quality sequence stop: 409.
Location/Qualifiers
1. .523
                                                                                                                                                                                              523 bp
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                          263 CCACACCTATTCATACTC 280
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1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 617-495-1812
Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                     sequence
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source

FEATURES

RESULT 44

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Gaps

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/organism="Homo sapiens"
//organism="Homo sapiens"
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/clone lib="Hr885 islet"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 21-OCT-2002
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Mammalia; Butheria; Craniata; Vertebrata; Buteleostomi;

Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;

Hominidae; Homo.

I (bases I to 526)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,

Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,

Lemishka, I., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,

Schmitt, A., Theishing, B., Ritter, E., Ronko, I., Bennett, J.,

Cardenas, M., Gibbons, W., McCann, R., Cole, R., Tsagareishvili, R.,

Williams, T., Jackson, Y. and Bowers, Y.

Fandozine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                              Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40UP from Gibco
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Washington University Genome Sequencing Center For information on
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Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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100.0%; Pred. No. 1.9e+02;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314-362-1916, Fax: 314-747-2692.
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Fax: 617-495-8557
Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 410.
Location/Qualifiers
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Homo sapiens
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nes 18; Conservative
                                                                      Tel: 617-495-1812
                                                                                                         Fax: 617-495-8557
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ271518 1kH85 islet Homo sapiens CDNA clone IMAGE:5781000 3' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA
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                                                                                                                                                   Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge, MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="Melton Amplified Mouse E16 5 Pancreas 3 M16S1
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Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;
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1 (bases 1 to 526)

Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Williams,T., Jackson,Y. and Bowers,Y. Cole,R., Tsagareishvili,R.,
Endocrine Panczeas Consortium
                                                                                                                                                                                                                                                                                                                                            Fax: 617-495-8557
Email: dmeltonomblobp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center This clone is
available royalty-free through LLNL; please contact the IMAGE
consortium (info@image.llnl.gov) for further information
Seq primer: -400P from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                               Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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Harvard University, Howard Hughes Medical Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="pancreas"
/dev_stage="Embryonic day E16.5"
/lab_host="DH10B"
   Williams, T., Jackson, Y. and Bowers, Y. Endocrine Pancreas Consortium Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Preparation: Guolin Chen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .526
/organism="Mus musculus"
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Location/Qualifiers
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/db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  248 ccacaccrarrcaracrc 231
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BQ271518.1 GI:20496584
                                                                                                         Other_ESTs: iil7e08.yl
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                                                                                                                                                                                                                                                                                                                Tel: 617-495-1812
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'clone lib="Barstead pancreas HPLRB1"
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BQ101169.1 GI:20134153
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Best Local Similarity 100.
Matches 18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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/ Organism= none sapiens...
/ (ab_ xref="taxon:9606"
/ (clone="INARD:18152"
/ (tissue type="Purified pancreatic islet"
/ (lab_host="DH10B"
/ (lab_host="DH10B"
/ (lab_host="DH10B"
/ (lab_host="Ch10B"
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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IMAGE:1412825 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR
(HUMAN), mRNA sequence.
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This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (infc@image.llnl.gov) for further information.
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 478.
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 18; DB 5; Length 526; 100.0%; Pred. No. 1.9e+02;
obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
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                                       (hinoue@im.wustl.edu)
Seq primer: -doRP from dibco
High quality sequence srop: 484.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300 CCACACCTATTCATACTC 317
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Contact: Wilson RK
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Best Local Similarity
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AA835293/c
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KEYWORDS
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Hominides, Homo.

Hominides, Homo.

Hominides, Homo.

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Hominides, Homo.

RS Melton, D., Brown, J., Kenty, G., Pérmutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, B., Ronko, I., Bennett, J., Williams, T., Jackson, Y. and Bowers, Y. Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium

Unpublished (2000)

Other_ESTS: ij24405.x1

Conteact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
/note="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site 1: EcoRI; Site 2: NotI; 1st strand cDNA was primed with a Not I - oligo(dT) primer
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center This clone is
available royalty-free through LINL, please contact the IMAGE
consortium (info@image.llnl.gov) for further information
Putative full length read
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/dev_stage="Adult"
/lab_host="DH10B"
/clone_lib="Melton Normalized Human Islet 4 N4-HIS 1"
/note="Organ: Pancreas; Vector: pSPORT1; Site_1: Not 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 18; DB 1; Length 52
100.0%; Pred. No. 1.9e+02;
iive 0; Mismatches 0; Indels
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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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Seg primer: -40RP from Gibco
High quality sequence stop: 475.
Location/Qualifiers
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Gaps

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/mol_type="mRNA"
// Ab xrefe="mRNA"
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// Ab most="mRNA"
// Ab most="mRNS islate"
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// Ab most="mrna"
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Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wusl.edu)
Putative full length read
vector to vector length is 572
Seq primer: -40RP from Gibco
High quality sequence stop: 480.
Location/Qualifiers
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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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(Dases 1 to 537)

Melton,D. Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Breetelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theishing,B., Ritter,E., Ronko,I., Bennett,J.,
Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R.,
Williams,T., Jackson,Y. and Bowers,Y.
Williams,T., Jackson,Y. and Bowers,Y.
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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                                                                                                      100.0%; Score 18; DB 1; Length 53
100.0%; Pred. No. 1.9e+02;
.ive 0; Mismatches 0; Indels
Library constructed by Bob Barstead.
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Pred. No. 1.9e+02;
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/organism="Homo sapiens"
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Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                          254 CCACACCTATICATACTC 237
                                                                                                                                                                                                                                                     1 CCACACCTATTCATACTC 18
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                                                                                                                                   Local Similarity 100.
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COMMENT
                                                                                                                                                                               Matches
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Site_2: Sal 1; Starting library constructed using SuperScript Plasmid Library kit (Life Technologies). CDNA made by Oligo-dr priming. Size-selected by column fractionation; average insert size 1.08 kb. Library was maplified once on solid support and plasmid DNA from library was prepared. The library DNA was normalized by method #4 from Bonaldo, Lennon, and Soares 1996 Genome Research 6:791-806; 0.5 microgram single-stranded library plasmid DNA was mixed with 5 micrograms PCR product representing library inserts and hybridized to an Ecot of 20. Single-stranded (unhybridized) plasmids were isolated by hydroxyapatite chromatography and used to make this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clome_lib="Barstead pancreas HPLRB1"
/note="Organ: pancreas; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site_1: EcoRi; Site_2: NotI;
1st strand cDNA was primed with a Not I - oligo(dT) primer
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1 (bases 1 to 512)
Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Karzman,D., Kucaba,T., Lacy,M., Leb,N., Lennon,G., Marra,M., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. Washly.NCI human BST Project
Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AndJJJ15
ak6608.81 Bargtead pancreas HPLRB1 Homo sapiens CDNA clone
IMAGE:1412870 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR
(HUMAN);, mRNA sequence.
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1800
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@mage.llnl.gov) for further information.
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 458.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 18; DB 3; Length 529; Best Local Similarity 100.0%; Pred. No. 1.9e+02; Matches 18; Conservative 0; Mismatches 0; Indels
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/db_xref="taxon:9606"
/clone="IMAGE:1412870"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        280 CCACCTATTCATACTC 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CCACACCTATTCATACTC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA835315.1 GI:2909043
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                     library."
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VERSION
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SOURCE
ORGANISM
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AUTHORS
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JOURNAL
COMMENT
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/lab.host="DH108"
/clone lib="HR85 islet"
/clone lib="HR85 islet"
/note="Corgan: Pancreas; Vector: pBluescript SK(-); Site_1:
/note="Corgan: Pancreas; Vector: pBluescript SK(-); Site_1:
Not1; Site_2: XhOi; cDNA made by oligo-dT priming.
Size-selected on agarose gel. Average insert size -1kb. 5'
XhOi site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box B127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@ingate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BM264109 552 bp mRNA linear EST 18-DEC-2001 ig31a01.yl HR85 islet Homo sapiens cDNA 5' similar to SW:PA21_HUMAN P04054 PHOSPHOLIPASE A2 PRECURSOR ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 617-495-1812
Fax: 617-495-857
Fax: 617-495-857
Fax: 617-495-857
Fax: 617-495-857
Fax: 617-495-857
Fax: 617-495-857
Figural dmelton@blobp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue
Obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -40UP from Gibco
High quality sequence stop: 455.
Location/Qualifiers
                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                      Hominidae, Homo.

1 (Dases 1 to 544)
Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Williams,T., Jackson,Y. and Bowers,Y. Cole,R., Tsagareishvili,R.,
Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .544
/organism="Homo sapiens"
/mol_type="mRNA"
/db_tref="trefn="5000"
/clone="IMAGE:6030718"
/tissue_type="Purified pancreatic islet"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
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                                               GI:21683536
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                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2000)
Other_ESTs: il21c12.y1
                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
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Best Local Similarity
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                      BQ632018
BQ632018.1
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                                                                                            SOURCE
ORGANISM
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BM264109
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                         ACCESSION
                                               VERSION
KEYWORDS
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                                                                                                                                                                                                                                           AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: pancreas, Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site 1: EcoRI; Site 2: NotI; 1st strand cDNA was primed with a Not I - oligo(dT) primer
  ö
                                                                                                                                                                                                                  EST 04-MAR-1998
A clone
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                         ak61a06.81 Baretead pancreas HPLRB1 Homo sapiens CDNA clone IMAGE:1412338 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR HDMAD1; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seg primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 423.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae, Homo.

1 (Dasas 1 to 539)

Hillier, L. Allen, W. Bowles, L., Dubuque, T., Geisel, G., Jost, S. Krizman, D., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R. Washl-WCI human Egr Project
  Gaps
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
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  Indels
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  ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dev_stage="adult, 34 years"
/lab_host="DH10B"
Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:1412338"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                            313 ccacaccrarrcaracrc 330
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                                             1 CCACACCTATTCATACTC
                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Conservative
18; Conservative
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Best Local Similarity
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BQ632018/c
LOCUS
DEFINITION
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KEYWORDS
SOURCE
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| 1...532
| / Crganiam="Homo sapiens"
| wol_type="mRNA"
| wol_type="mRNA"
| / db_te="IMAGE:6127213"
| / clone="IMAGE:6127213"
| / clone="IMAGE:6127213"
| / clone="Ib="HR85 islet"
| / lab host="PHIOB"
| / clone=| lib="HR85 islet"
| / note="Organ: Pencreas; Vector: pBluescript SK(-); Site_1:
| / note="Organ: Pencreas; Vector: pBluescript Site_1: Site_1
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A1925956 562 bp mRNA linear EST 07-MAR-200 whl2g03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2380564 3' similar to gb:M21054 PHOSPHOLIPASE A2 PRECURSOR (HUMAN);, mRNA
                                                                                                                                           Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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1 (bases 1 to 562)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                          Email: dmelton@biohp.harvard.edu
This read is a 5' RESEQUENCE of a previously sequenced pancreas
                                     Unpublished (2000)
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                Good hit to opposite strand read. .wrong orientati
MOUSE-PANCREAS VERIFICATION
Possible reversed clone: similarity on wrong strand
Seq primer: -40UP from Gibco.
Location/Qualifiers
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100.0%; Pred. No. 1.9e+02;
ive 0; Mismatches 0;
   WashU-Harvard Pancreas EST Project
                                                                                                                 Endocrine Pancreas Consortium
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A1925956.1 GI:5661920
EST.
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                   MA 02138
Tel: 617-495-1812
                                                                                                                                                                                                                                                                                               Fax: 617-495-8557
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A1925956/c
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DEFINITION
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COMMENT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_Torgan: Panceas; Vector: pBluescript SK(-); Site_1: Note=Torgan: Panceas; Vector: pBluescript SK(-); Site_1: Site_2: XhoI; cDNA made by oligo-dr priming.
Size-selected on agarose gel. Average insert size ~1kb. 5; XhoI site was destroyed after directional cloning. Amplified once. Contact information: Hiroshi Innoue, MD, Metabolism Div. (Alan Permut Lab), Washington University School of Medicine, Box 8127, 660 South Euclid Ave., St. Louis, MO 63110, E-mail: hinoue@ingate.wustl.edu, Tel: 114-362-1916, Fax: 314-747-2692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae, Homo.

1 (bases 1 to 553)

1 (bases 1 to 553)

Melcon,D., Meadows,A., Clifton,S., Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blstain,A., Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Williams,T., Jackson,Y. and
                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: 617-495-8557
Email: dmelton@blohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on obtaining a clone please contact: Dr. Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                  Hominidae; Homo.

1 (bases 1 to 552)
Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K.,
Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S.,
Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A.,
Schmitt,A., Theising,B., Ritter,E., Ronko,I., Bennett,J.,
Cardense,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R.,
Williams,T., Jackson,Y. and Bowers,Y.
Endocrine Pancreas Consortium
Unpublished (2000)
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       Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
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/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (hinoue@im.wustl.edu)
Seg primer: -40RP from Gibco
High quality sequence stop: 473.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CCACACCTATTCATACTC 18
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Matches 18; Conservative
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VERSION
                                                                           REFERENCE
                                                                                                                 AUTHORS
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Gaps

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Length 553; 0; Indels EST 07-MAR-2000

FEATURES

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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.B. Consortium/Lint at: http://image.llnl.gov Series: IRAL Plate: 31 Row: h Column: 11
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gl: 4505846 This clone has the following problem: frame shifted.

Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cgapbs-r@mail.nih.gov
Tissue Procurement: CLONTECH
CDNA Library Preparation: CLONTECH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadan@systemsbiology.org
Anup Madan, Rachel Dickhoff, Jessica Fahey, Stephanie Ford, Julia
Greene, Mark Ketteman and Anuradha Madan
                                                                                                                                                                                                                                                                                                                                 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (31-AUG-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                 ECULISB4 11near HTC 29.
Homo sapiens, phospholipase A2, group IB (pancreas), clone
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 18; DB 4; I
100.0%; Pred. No. 1.9e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pDNR-LIB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:3950037"
/tissue_type="Pancreas"
/clone_lib="NIH_MGC_78"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="GeneID:5319"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        host="DH10B
  302 CCACACCTATTCATACTC 319
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                                                                                                                                                                                                                                  BC013384.1 GI:15426542
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BP322008.1 GI:52250983
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1 (bases 1 to 577)
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Best Local Similarity 100.
Matches 18; Conservative
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TITLE
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BP322008
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                                                                                                                                                                                                                                                                       /clone lbb="NCI CGAP Kidl1"
//clone lbb="NCI CGAP Kidl1"
//note="Organ: Kidney; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Sitel: Not 1; Site_2: ECO RI; Plasmid DNA from the normalized library NCI CGAP Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (clonelDS 1322376-1323911, 1456077-1456775, and Fatima Bonaldo. "Subtraction by Bento Soares and M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                572 bp mRNA linear EST 17-SEP-2004
BP323152 Sugano cDNA library, pancreas Homo sapiens cDNA clone
PNC03992, mRNA sequence.
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Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushina-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous
block structure in the promoter regions
Genome Res. 14 (9), 1711-1718 (2004)
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Mammalia, Butheria, Euarchontoglires, Primates, Catarrhini,
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Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 18; DB 1; Length 562; Best Local Similarity 100.0%; Pred. No. 1.9e+02; Matches 18; Conservative 0; Mismatches 0; Indels
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/clone_lib="Sugano cDNA library, pancreas"
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 672 Std Error: 0.00
Seg primer: -40UP from Gibco
High quality sequence stop: 462.
                                                                                                                      / organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:2380564"
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DEFINITION

RESULT 57

ORIGIN

BP323152

ORGANISM VERSION KEYWORDS SOURCE ACCESSION

REFERENCE AUTHORS JOURNAL PUBMED

COMMENT

TITLE

FEATURES

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Gaps

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Homo sapiens (human)

1 CCACACCTATTCATACTC 18

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PNC05643, mRNA sequence.
                                                           Hominidae, Homo.

1 (bases 1 to 579)

2 (bases 1 to 579)

Mizuaki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,

Mizushima-Sugano,J., Nakai,K. and Sugano,S.

Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions

Genome Res. 14 (9), 1711-1718 (2004)
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Hominidae, Homo.

Lobses 1 to 580)

Suzuki, Y., Yamashita, Shirota, M., Sakakibara, Y., Chiba, J.,

Mizushima-Sugano, J., Nakai, K. and Sugano, S.

Sequence comparison of human and mouse genes reveals a homologous block structure in the promoter regions

Genome Res. 14 (9), 1711-1718 (2004)
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                 Eukaryoča, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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15342556
Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
Location/Qualifiers
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Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: yauzuki@ims.u-tokyo.ac.jp.
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100.0%; Score 18; DB 3; Length 579;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 18; Conservative 0; Mismatches 0; Indels
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/organism="Homo sapiens"
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Search completed: May 10, 2006, 20:28:54 Job time : 3772 secs

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ZIP: 94304

COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
    COMPUTER: Ploppy disk
    COMPUTER: The PROPERTION COMPUTER: The PROPERTION COMPUTER: The PROPERTION COMPUTER: The PROPERTION CATCOM DATA:
    PELICATION NUMBER: US/09/021,655
    FILING DATE: HEREWITH
    CLASSIFICATION DATA:
    APPLICATION NUMBER: The PRIOR APPLICATION APPLICATION NUMBER: THE PRIOR APPLICATION NUMBER: THE PRIOR APPLICATION APPLICATION NUMBER: THE PRIOR APPLICATION APPLIC
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Matches 18; Conservative
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US-09-949-016-140490
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14260, A
14261, A
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111306, A
111395, A
11622, A
1632, A
16307, A
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18, Appl
16473, A
12011, A
32, Appl
18122, A
16821, A
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Batent No. 6607879

GENERAL INFORMATION:
APPLICANT: Cocke, Benjamin G.
APPLICANT: Susan G. Stuart
APPLICANT: Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF BLOOD CELL GENE
TITLE OF INVENTION: EXPRESSION
NUMBER OF SEQUENCES: 1508
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
CITY: PALO ALTO
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Gaps

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0; Indels

100.0%; Score 18; DB 100.0%; Pred. No. 4.2 tive 0; Mismatches

DB 3; Length 562;

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US-U9-99-U0-140490

j Sequence 140490, Application US/09949016

patent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILE REPERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

SPIOR PELING DATE: 2000-10-03

SPIOR PELING DATE: 2000-10-03

SOUTHARE: PESSEQ for Windows Version 4.0

SEQ ID NO 140490

LENGTH: 601
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Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-140490
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1 CCACACCTATTCATACT 17

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; Sequence 15721, Application US/09949016
                 ZIF: 73.00
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC_DOS/MS_DOS
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| LOCATION: (1)...(30172)

| OTHER INFORMATION: n = A,T,C or G

US-09-949-002-660
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MOLECULE TYPE: DNA (genomic)
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NUCLEIC ACID
EDNESS: double
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Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
US-09-949-002-660/c
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ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
US-09-949-016-15721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-07-845-989-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
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| Patent No. 5360901
| GENERAL INFORMATION:
| APPLICANT: BERKA, RANDY M
| APPLICANT: FOWLER, TIMOTHY
| APPLICANT: REY, MICHAEL W
| TITLE OF INVENTION: CATALASE-R
| NUMBER OF SEQUENCES: 9
| CORRESPONDENCES ADDRESS:
| ADDRESSEE: GENENCOR INTERNATIONAL, INC.
                                                                                                                                                           US-07-846-181-6
Sequence 6, Application US/07846181
Sequence 7. Sequence 6, Application US/07846181
Sequence 6, Application US/07846181
Sequence 6, Application Sequence 1. Se
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APPLICATION NUMBER: US/07/846,181
FILING DATE: 19920304
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 15.4; DB 2;
Pred. No. 1.3e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSE: GENENCOR INTERNATIONAL, INC.
STREET: 180 KIMBALL WAY
CITY: SOUTH SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY AGENT INFO 13-01

NAME: HORN MS, MARGARET A

REGISTRATION NUMBER: 33-01

REPERENCE/DOCKET NUMBER: 36C204-US1

RELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-742-7217

INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:

LENGTH: 8233 base pairs

TYPE: NUCLEIC AGID

STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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307 CCACCCTATTGATACT 323
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MOLECULE TYPE: DNA (genomic)
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94.1%;
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CITY: SOUTH SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 94.1
Matches 16; Conservative
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GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH INFLAMMATORY AUTOIMMUNE DISEASE, METHODS OF DETECTION

TITLE OF INVENTION: WITH INFLAMMATORY AUTOIMMUNE DISEASE, METHODS OF DETECTION

TITLE OF INVENTION: WID USES THEREOF

TITLE OF INVENTION: AND USES THEREOF

FILE REFERENCE: CLOOO790

CURRENT APPLICATION NUMBER: 60/231,401

PRIOR APPLICATION NUMBER: 60/231,401

PRIOR PILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 10823

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 660

LENTH: 30172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85.6%; Score 15.4; DB 2; Length 8533; 94.1%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels 0;
MEDIUM ....

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/845,989
FILING DATE: 19920304
CLASSIFICATION: 435
ATTORNEY AGENT INFORMATION:
NAME: HORN MS, MARGARET A
REGISTRATION NUMBER: GC208-US1
REFERENCE/DOCKET NUMBER: GC208-US1
TELEPHONE: 415-742-7536
TELEPHONE: 415-742-7217
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
FUNCTION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
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FARENT NO. SEL233

FARENTAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CLOOL307
CURRENT FILING DATE: 2000-04-14
FRIOR PELING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
SPIOR FILING DATE: 2000-09-08
SPIOR FILING DATE: 2000-09-08
SPIOR FILING DATE: 2000-09-08
SPIOR FILING DATE: 2000-10-03
SPIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
SPIOR FILING DATE: 2000-09-08
SPIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-03
PRIOR P
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APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CL001307
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                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Homburger et al.
TILLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster.
TILLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster.
TILLE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SEQ ID NO 29684
LENGTH: 482
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Pred. No. 2.1e+02;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: n means any nucleotide US-09-270-767-29684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 132353, Application US/09949016
Patent No. 6812339
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                                                                                                          Sequence 29684, Application US/09270767
Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Drosophila melanogaster
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Best Local Similarity 88.9
Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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; ORGANISM: Human
US-09-949-016-132353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-949-016-140957
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                                                                               US-09-270-767-29684
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| Batent No. 6905827
| GENERAL INFORMATION:
| APPLICANT: Wohldemuth, Jay
| APPLICANT: Wohldemuth, Jay
| APPLICANT: Wooldemuth, McDemuth, Jay
| APPLICANT: Wooldemuth, Jay
| APPLICANT: Wooldemuth, Robert
| APPLICANT: Wooldemuth, Robert
| APPLICANT: Ly, NGoC
| TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING AND MONITORING AUTOIMMUNE
| TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES
| TITLE OF INVENTION: UNMBER: US/10/131,827
| CURRENT FILING DATE: 2001-10-22
| PRIOR PILING DATE: 2001-10-22
| PRIOR PILING DATE: 2001-10-22
| PRIOR PILING DATE: 2001-10-22
| PRIOR FILING DATE: 2001-10-23
| PRIOR FILING DATE: 2001-10-28
| NUMBER OF SEQ ID NOS: 9990
| NUMBER OF SEQ ID NOS: 9990
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOCTWARE: FREESEQ for Windows Version 4.0
SEQ ID NO 15721
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
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OTHER INFORMATION: n = A, C, T or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (1).T.(49487)
OTHER INFORMATION: n = A,T,C or G
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Best Local Similarity 94.1*
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US-10-131-827-8758/c
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88.9%; Pred. No. 2.5e+02;
iive 0; Mismatches 2; Indels 0;
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Pred. No. 2.5e+02;
0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: BRISTOL-MYERS SQUIBB COMPANY
TITLE OF INVENTION: NOVEL ORGANIC ANION TRANSPORT PROTEINS
TITLE OF INVENTION: NOVEL ORGANIC ANION TRANSPORT PROTEINS
FILE REFERENCE: DB23
CURRENT FILING DATE: 08.90-05-19
CURRENT FILING DATE: 19.99-05-20
NUMBER OF SEQ ID NOS: 29
SOFTWARE: PATENTIN Version 3.2
SEQ ID NO 7
88.9%; Pred. No. 2.3e+02;
tive 0; Mismatches 2; Indels
                                                                                                                                                                      Sequence 7, Application US/09575081B Patent No. 6692934
                                                                                        1026 ccacarcrcrrcaracrc 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1669 CCACACTATTCACACAC 1686
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88.9%;
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ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc feature
LOCATION: (713)..(713)
OTHER INFORMATION: y = c or t
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Best Local Similarity 88.9
Matches 16; Conservative
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Matches 16, Conservative
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ORGANISM: Homo sapiens
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Matches 16; Conserv
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US-10-104-047-1028
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US-09-575-081B-7
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Sequence 46, Application US/09328352

Sequence 46, Application US/09328352

Sequence 46, Application US/09328352

Sequence 46, Application US/09328352

GENERAL INFORMATION:

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER

TITLE OF INVENTION: BAUMANNI FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: GTC99-03PA

CURRENT APPLICATION NUMBER: US/09/328,352

CURRENT FILING DATE: 1999-06-04

NUMBER OF SEQ ID NOS: 8252

SEQ ID NO 46
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Patent No. 6703491
GENERAL IMPORMATION:
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 13670
LENGTH: 1298
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                                                                                                                                                                                                                                                                                               Length 601;
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Pred. No. 2.2e+02;
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Pred. No. 2.1e+02;
0; Mismatches 2;
             CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
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 CURRENT APPLICATION NUMBER: US/09/949,016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Acinetobacter baumannii
                                                                                                                                                                                                                                                                                                                                                                                                          141 CCACACCTATTCACTCTC 158
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88.9%;
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Best Local Similarity 88.9
Matches 16; Conservative
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Matches 16, Conservative
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US-09-949-016-140957
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US-09-270-767-13670
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LENGTH: 601
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Score 14.8; DB 3; Length 14673;
Pred. No. 2.8e+02;
0; Mismatches 2; Indels 0;
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  82.2%;
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88.9%;
  Query Match
Best Local Similarity 88.9
Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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CRGANISM: Human
US-09-949-016-15492
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ORGANISM: Human
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US-09-949-016-15491
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APPLICAMT: VENTER, J. Craig et al.
APPLICAMT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FREUESEQ for Windows Version 4.0
SEQ ID NO 15540
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Pred. No. 2.5e+02;
0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Wang, Dunrui
APPLICANT: Yang, Yonghong
APPLICANT: Wang, Yonghong
APPLICANT: Wheman, Tom
APPLICANT: Ghosh, Reena
APPLICANT: Drmanac, Radoje T.
ITLE OF INVENTION: No. 6783969e1 Nucleic Acids and
ITLE OF INVENTION: Polypeptides
FILE REPERENCE: 803
CURRENT APPLICATION NUMBER: US/09/799,451
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
SOFTWARE: PL_genes Version 2.0
SEQ ID NO 260
                                    ; Sequence 260, Application US/09799451
; Patent No. 6783369
; GENERAL INFORMATION:
; APPLICANT: Tang, Y. Tom
; APPLICANT: Zhou, Ping
; APPLICANT: Asundi, Vinod
; APPLICANT: Ren, Feiyan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 16
US-09-99-016-15540/c
US-09-016-15540, Application US/09949016
; Patent No. 6812339
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                                                                                                                                                                                                         Zhang, Jie
Xue, Aidong J.
Zhao, Qing A.
Wang, Jian-Rui
Ma, Yunqing
Yamazaki, Victoria
Chen, Rui-hong
Wang, Zhiwei
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Best Local Similarity 88.9%;
Matches 16; Conservative
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; LOCATION: (718)..(2778)
US-09-799-451-260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
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; ORGANISM: Human
US-09-949-016-15540
  RESULT 15
US-09-799-451-260
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Sequence 15492,
Sequence 15492, Application US/09949016
Sequence 15492, Application US/09949016
Falent No. 681239
GENERAL INFORMATION:
APPLICATI' VENTER, U. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CLOOD 1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
FRIOR APPLICATION NUMBER: 60/231,768
FRIOR PELING DATE: 2000-10-20
FRIOR APPLICATION NUMBER: 60/237,768
FRIOR PELING DATE: 2000-10-03
FRIOR PELING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FEAST END NOS: 207012
SOFTWARE: FEAST END NOS: 207012
SOFTWARE: 86877
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Pred. No. 3.38+02;
0; Mismatches 2; Indels 0;
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1 CCACACCTATTCATACTC 18

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; Sequence 17371, Application US/09949016
; Batent No. 6812339
; GENERAL INFORMATION:
    TITLE OF INVENTION: DOLYMORPHISMS IN KNOWN GENES ASSOCIATED
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    CURRENT APPLICATION NUMBER: 0/29/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR PELLING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SEQ ID NOS: 207012
; SEQ ID NO 17371
                                                                                                                   US-09-949-016-13358/C

Sequence 13358, Application US/09949016

Patent No. 681239

GENERAL INPORMATION:

APPLICANT: VEWTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TURENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: PSELEGE for Windows Version 4.0

SEQ ID NO 13358

LEMOTH: 260247
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88.9%; Pred. No. 3.6e+02;
iive 0; Mismatches 2; Indels 0;
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88.9%; Pred. No. 3.7e+02;
tive 0; Mismatches 2;
129567 CCACACCTATTCACACAC 129550
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US-09-949-016-17371
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Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Human
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ORGANISM: Human
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                                                                                                                                                                                                                 APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTON: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTON: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-10-12
PRIOR FILING DATE: 2000-10-20
PRIOR PLILOR DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
SOFTWARE: FASTSEQ FOR WINDOWS VERSION 4.0
SOFTWARE: FASTSEQ FOR WINDOWS VERSION 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 20
US-09-949-016-15830/c

US-09-949-016-15830 Application US/09949016

Faquence 15830 Application US/09949016

Fatent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT FILING DATE: 2000-04-14

FRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/237,768

FRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

FRIOR FILING DATE: 2000-10-03

FRIOR FILING DATE: 2000-09-08

FRIOR FILING DATE: 2000-09-08
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82.2%; Score 14.8; DB 3;
Best Local Similarity 88.9%; Pred. No. 3.6e+02;
Matches 16; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 14.8; DB 3;
Pred. No. 3.5e+02;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                    , Sequence 15729, Application US/09949016; Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140850 CCACACCTATTCACTCTC 140867
                            NAME/KEY: misc_feature; LCCATION: (1)...(148783); OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CCACACCTATTCATACTC 18
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88.9%;
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Best Local Similarity 88.9°
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Human
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; ORGANISM: Human
US-09-949-016-15830
                                                                                                                          RESULT 19
US-09-949-016-15729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 148783
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Sequence 49993, Application US/09949016
; Sequence 49933, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
APPLICANT: VENTER, US. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PELLING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOCTHARE: FSELESE for Windows Version 4.0
; SGC ID NO 49993
LENGTH: 601
                                                                                                                                                                                              US-09-949-016-49992

US-09-949-016-49992

Sequence 49992, Application US/09949016

Petent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WIMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR PELING DATE: 2000-10-03

PRIOR PELING DATE: 2000-10-03

PRIOR PLING DATE: 2000-10-03

PRIOR PLING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: PSELSCA for Windows Version 4.0

SEQ ID NO 49992

LENGTH: 601

TYPE: DA

US-09-949-016-49992
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                                                                                    95949 ccacaccrarrcacacac 95966
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Matches 15; Conservative
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Matches 15; Conservative
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ORGANISM: Human
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APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFRENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,756
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOCTAME: PRESEQ FOR WINDOWS Version 4.0
SEQ ID NO 12062
LEGISTAL STANDARD STANDAR
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88.9%; Pred. No. 3.7e+02;
tive 0; Mismatches 2; Indels 0;
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Pred. No. 3.8e+02;
0; Mismatches 2; Indels 0;
                                                                                                                                               ; Sequence 12062, Application US/09949016; Patent No. 6812339
274013 CCACACCTCTTCAGACTC 274030
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| LOCATION: (1)...(373694)

| OTHER INFORMATION: n = A,T,C or G

US-09-949-016-12062
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; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-15473
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Best Local Similarity 88.9
Matches 16; Conservative
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Best Local Similarity 88.5
Matches 16; Conservative
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                                                                                          RESULT 23
US-09-949-016-12062
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APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CLOOI307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0
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; LOCATION: 3953,4056,4167,4739,6217,6245,6860,9998..9999,10006,10012,10104

; LOCATION: 10477,10822,10825,11095,11256,11273,11857..11858,11895..11896

; LOCATION: 14057,15912..15913,16217..16218,16329..16330,17504

; CTHER INFORMATION: n=a, g, c or t

US-09-762-311-1
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NAME/KEY: alleter
NAME/KEY: alleter
NOTHER INFORMATION: 99-430-352: polymorphic base A or G
NAME/KEY: primer bind
LOCATION: 9391..5408
NOTHER INFORMATION: 99-430.rp
NAME/KEY: primer bind
LOCATION: 9828..5845
NOTHER INFORMATION: 99-430.pu complement
NAME/KEY: primer bind
LOCATION: 9475..5493
NOTHER INFORMATION: 99-430-352.mis
NAME/KEY: primer bind
LOCATION: 9495..5513
NOTHER INFORMATION: 99-430-352.mis complement
NAME/KEY: primer bind
LOCATION: 9495..5513
NOTHER INFORMATION: 99-430-352.mis complement
NAME/KEY: primer bind
LOCATION: 9495..5519
NOTHER INFORMATION: 99-430-352.probe
                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: 1..2000
OTHER INFORMATION: 5' regulatory region
NAME/KEY: exon
LOCATION: 2001..2077
OTHER INFORMATION: exon 1
LOCATION: 12292..12373
OTHER INFORMATION: exon 1b
NAME/KEY: exon
LOCATION: 12292..12373
OTHER INFORMATION: exon 1b
NAME/KEY: exon
LOCATION: 127940..13249
OTHER INFORMATION: exon 2
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; Sequence 13200, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
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PRIOR FILING DATE: 1998-08-07
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Best Local Similarity 93.8'
                              NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patent.pm
SEQ ID NO 1
LENGTH: 17590
                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                               FEATURE:
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                                                                                        Sequence 3390, Application US/09543681A

Patent No. 6605709

GENERAL INCRAMION:
TITLE OF INVENTION:
TITLE OF INVENTION WHERE:
TITLE OF INVENTION:

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Sequence 1, Application US/09762311
Sequence 1, Application US/09762311
Sequence 1, Application US/09762311
Sequence 1, Application US/09762311
GENERAL INCORMATION:
APPLICANT: BLUMENFELD, Marta
APPLICANT: BUGGUELERET, Lydie
APPLICANT: CHUMAKOV, 11ya
TITLE OF INVENTION: Thereof.
TITLE OF INVENTION: Thereof.
FILE REFERENCE: 46.USZ.PCT
CURRENT APPLICATION NUMBER: US/09/762,311
CURRENT FILING DATE: 2001-06-21
PRIOR APPLICATION NUMBER: US 60/095,653
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80.0%; Score 14.4; DB 3; Length 1728; 93.8%; Pred. No. 3.8e+02;
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Batent No. 6943241

GENERAL INFORMATION ESEARCH INSTITUTE

TITLE OF INVENTION: No. 6943241e1 full length cDNA

TITLE OF INVENTION: No. 6943241e1 full length cDNA

TITLE OF INVENTION: No. 6943241e1 full length cDNA

FILE REFERENCE: H1-a0105

CURRENT APPLICATION NUMBER: US/10/104,047

CURRENT FILING DATE: 2002-03-25

PRIOR APPLICATION NUMBER: SOCIMBER OF SEQ ID NOS: 4096

SOCIWARE: PatentIn Ver. 2.1

SEQ ID NO 150

LENGTH: 3154
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 93.8
Matches 15; Conservative
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US-10-104-047-150
                       RESULT 27
US-09-543-681A-3390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 28
US-10-104-047-150/c
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Sequence 17192/C

Sequence 17192, Application US/09949016

Sequence 17122, Application US/09949016

BENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: 60/241, 755

PRIOR PLILNG DATE: 2000-10-20

PRIOR PLILNG DATE: 2000-10-20

PRIOR PLILNG DATE: 2000-10-03

PRIOR PLILNG DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 17192

TYPE: DAA

ORGANISM: Human
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; Sequence 15393, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
; APPLICANT: VERTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT PILING DATE: 2000-04-14
; PRIOR PILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-00-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-010-03
; PRIOR FILING DATE: 2000-04-04
; PRIOR FILING DATE: 2000-04-05
; PRIOR FILING DATE: 2000-04-05
; PRIOR FILING DATE: 2000-04-04
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NAME/KEY: misc_feature
LOCATION: (1) ... (107937)
OTHER INFORMATION: n = A,T,C or G
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Best Local Similarity 93.8%
Matches 15; Conservative
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Best Local Similarity 93.8
Matches 15; Conservative
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US-09-949-016-15393/c
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ORGANISM: Human
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US-09-780-049-18/c
; Sequence 18, Application US/09780049
; Sequence 18, Application US/09780049
; Batent No. 646526
; GENERAL INFORMATION:
; APPLICANT: Brett P. Monia
; APPLICANT: Jacqueline Wyatt
; TITLE OF INVENTION: EXPRESSION
; FILE REFERENCE: RTS-0134
; CURRENT APPLICATION UNMBER: US/09/780,049
; CURRENT FILING DATE: 2001-02-09
; NUMBER OF SEQ ID NOS: 96
; SEQ ID NO 18
; LENGTH: 40000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILE REFERENCE: CLO01307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 17285
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80.0%; Score 14.4; DB 3; Length 33353;
Best Local Similarity 93.8%; Pred. No. 5e+02;
Matches 15; Conservative 0; Mismatches 1; Indels 0;
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                                                                                                                                                                                                          Length 28494;
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80.0%; Score 14.4; DB 3;
Best Local Similarity 93.8%; Pred, No. 4.9e+02;
Matches 15; Conservative 0; Mismatches 1;
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US-09-949-016-17285/c
; Sequence 17285, Application US/09949016
; Patent No. 6812339
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Best Local Similarity 93.8
Matches 15; Conservative
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                                                                  TYPE: DNA
ORGANISM: Human
                                                                                                                                           US-09-949-016-13200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-949-016-17285
SEQ ID NO 13200
LENGTH: 28494
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US-00-513-999C-34796

US-00-513-999C-34796

Sequence 34796, Application US/09513999C

Sequence 34796, Application US/09513999C

Sequence 34796, Application US/09513999C

GENERAL INFORMATION:

APPLICANT: Duclert, A.

APPLICANT: Glordano, J.Y.

TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.

Patent No. 6783961

FILE REFERENCE: 59.US2.REG

CURRENT APPLICATION NUMBER: US/09/513,999C

CURRENT FILING DATE: 1999-02-26

NUMBER OF SEQ ID NOS: 36681

SOFTWARE: Patent.pm

SEQ ID NO 34796

LENGTH: 162

LENGTH: 162
                                                                     Sequence 737, Application US/09304232

Sequence 737, Application US/09304232

Retent No. 6525185

GENERAL INFORMATION:

APPLICANT: Fan, Jian Bing

APPLICANT: Halushka, Marc Kenneth

APPLICANT: Case Western Reserve University School of Medicine

APPLICANT: Affymetrix, Inc.

TITLE OF INVENTION: Polymorphisms Associated With

TITLE OF INVENTION: Hypertension

TILE REFERENCE: 10854-034210US

CURRENT FILING DATE: 1999-05-03

CURRENT FILING DATE: 1999-05-03

EARLIER FILING DATE: 1999-05-07

NUMBER OF SEQ ID NOS: 909

SEQ ID NO 737

ENGRY FALSE FEASTER FALSE FALSE FALSE FEASTER FILING DATE: 1808-05-07

SEQ ID NO 737
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US-09-304-232-737
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FRATURE:
NAME/KEY: misc_feature
LOCATION: 63
OTHER INFORMATION: v=a or c or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/KEY: misc_feature
LOCATION: 130
OTHER INPORMATION: d=a or g or
US-09-513-999C-34796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial Sequence
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LOCATION: 47
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ORGANISM: Homo sapiens
                                                                  US-09-304-232-737
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Sequence 13840, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT PILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR PRILING DATE: 2000-10-03

PRIOR PRILING DATE: 2000-10-03

PRIOR PRILING DATE: 2000-10-03

PRIOR PRILING DATE: 2000-010-03

PRIOR FILING DATE: 2000-010-03

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Pred. No. 5.9e+02;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80.0%; Score 14.4; DB 3; Length 640681; 93.8%; Pred. No. 5.9e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(276687)
COTHER INFORMATION: n = A,T,C or G
US-09-949-016-13840
139221 CCACACCTATTCATTC 139206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181287 CCACACCTATTCATCC 181272
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 93.8%;
Matches 15; Conservative
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Best Local Similarity 93.8
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 276687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 36
US-09-790-988-1/c
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Sequence 321, Application US/09328352
Patent No. 6562958
GENERAL INFORMATION:
APPLICANT: Gary L. Breton et al.
APPLICANT: Gary L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER
TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: GTC99-03PA
CURRENT APPLICATION NUMBER: US/09/328,352
CURRENT FILING DATE: 1999-06-04
NUMBER OF SEQ ID NOS: 8252
SEQ ID NO 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 17511, Application US/09949016

Sequence 17511, Application US/09949016

Batent No. 6812339

GENERAL INFORMATION:

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FESGE FOR WINDOWS Version 4.0

SEQ ID NO 17511

LENGTH, 44676
                                                     Gaps
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100.0%; Pred. No. 8.3e+02;
.ive 0; Mismatches 0; Indels
                                                     Indels
                         Pred. No. 5.6e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
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US-09-949-016-16502
Sequence 16502, Application US/09949016
; Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Acinetobacter baumannii
US-09-328-352-321
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100.0%; Pr
                         Best Local Similarity 100.0%; P:
Matches 14; Conservative 0;
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                                                                                                                                                                          454 CACACCTATTCATA 467
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                                                                                                                 2 CACACCTATTCATA 15
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Best Local Similarity 100.
Matches 14; Conservative
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Best Local Similarity
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US-09-949-016-17511/c
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CRGANISM: Human
US-09-949-016-17511
                                                                                                                                                                                                                                                                      RESULT 41
US-09-328-352-321
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Sequence 168810, Application US/09949016

GENERAL INPORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT FILING DATE: 2000-04-14

PRIOR PILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR PLILING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-0-08

SPRIOR PLILING DAT
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US-09-533-559-293

US-09-533-559-293

Sequence 293, Application US/09533559

Patent No. 690287

GENREAL INFORMATION:

APPLICANT: Randy M. Berka

APPLICANT: Achalen

APPLICANT: Deferey R. Shuster

APPLICANT: Deter Bjarke Olsen

TITLE OF INVENTION: Expression

TITLE OF INVENTION: Expression

FILE REPERENCE: 5849.200-US

CURRENT FILING DATE: 1999-03-22

EARLIER APPLICATION NUMBER: 09/273,623

EARLIER FILING DATE: 1999-03-22

MUMBER OF SEQ ID NOS: 7860

SOFTWARE: FALSEQ for Windows Version 4.0

SEQ ID NO 293

LENGTH: 636
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100.0%; Pred. No. 5.6e+02;
cive 0; Mismatches 0; Indels
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                                                            Indels
Pred. No. 4.9e+02;
                                                            1; Mismatches
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OTHER INFORMATION: n = A,T,C or G
                                                                                                                 1 CCACACCTATTCATACTC 18
                                                                                                                                                       51 CAACACCAATTCVTACTC 68
                            83.3%;
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                            Best Local Similarity 83.3
Matches 15, Conservative
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Best Local Similarity 100.
Matches 14; Conservative
                                                                                                                                                                                                                                                                         RESULT 39
US-09-949-016-168810/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Human
US-09-949-016-168810
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GENERAL INFORMATION:
APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster;
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Lockrie, Nikos

APPLICANT: Gold, Larry

TITLE OF INVENTION: High Affinity TGFBeta Nucleic Acid Ligands and

TITLE OF INVENTION: Inhibitors

TITLE OF INVENTION: Inhibitors

FILE REFERENCE: NEX 87/191,301

CURRENT APPLICATION NUMBER: US/09/791,301

CURRENT FILING DATE: 2001-02-23

FRIOR APPLICATION NUMBER: 09/046,247

PRIOR APPLICATION NUMBER: 09/144,131

PRIOR APPLICATION NUMBER: 07/714,131

PRIOR APPLICATION NUMBER: 07/714,131

PRIOR APPLICATION NUMBER: 07/931,473

PRIOR FILING DATE: 1992-08-17

PRIOR FILING DATE: 1993-00-08-17

PRIOR FILING DATE: 1993-00-08

PRIOR APPLICATION NUMBER: 07/536,428

PRIOR FILING DATE: 1999-07-29

PRIOR FILING DATE: 1999-07-29

PRIOR FILING DATE: 1999-07-29

NUMBER OF SEQ ID NOS: 216

SEQ ID NO 153

LENGTH 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Synthetic NAME/KEY: modified base LOCATION: (1)..(65)
OTHER INFORMATION: All pyrimidines are 2'F.
                                                        76.7%; Score 13.8; DB 3; Length 65; 88.2%; Pred. No. 5.8e+02; ive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.7%; Score 13.8; DB 3; Length 65; 88.2%; Pred. No. 5.8e+02; Live 0; Mismatches 2; Indels
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Patent No. 6703491
                                                                                                                                                                                                                                                                                                                                                                                          Sequence 153, Application US/09791301
Patent No. 6713616
                                                                                                                                                                                                                                         45 cácagcráracarácic 29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: RNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                2 CACACCTATTCATACTC
                                                        Query Match 76.7
Best Local Similarity 88.2
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 88.2
Matches 15; Conservative
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US-09-270-767-30909/c
                                                                                                                                                                                                                                                                                                                                 RESULT 45
US-09-791-301-153/c
JS-09-363-939A-153
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                      APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PELING DATE: 2000-10-03
PRIOR PELING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FEALSEQ for Windows Version 4.0
SEQ ID NO 16502
LENGTH: 157032
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APPLICANT: Podration, Nikos
APPLICANT: Cochrie, Michael
APPLICANT: Cochrie, Michael
APPLICANT: Cochrie, Michael
APPLICANT: Cochrie, Michael
APPLICANT: Gold, Larry
TITLE OF INVENTION: High Affinity TGFBeta Nucleic Acid Ligands and
TITLE OF INVENTION: Inhibitors
TITLE OF INVENTION: Inhibitors
TITLE OF INVENTION: INHIBITORS: US/09/363,939A
CURRENT FILING DATE: 1999-07-29
FRIOR APPLICATION NUMBER: 09/46,247
FRIOR APPLICATION NUMBER: 08/458,424
FRIOR APPLICATION NUMBER: 08/458,424
FRIOR APPLICATION NUMBER: 07/714,131
FRIOR PILING DATE: 1992-06-10
FRIOR PILING DATE: 1992-06-10
FRIOR PILING DATE: 1992-06-10
FRIOR PILING DATE: 1992-06-10
FRIOR PILING DATE: 1992-06-11
FRIOR PELING DATE: 1992-06-11
FRIOR PELING DATE: 1990-06-11
FRIOR FILING DATE: 1990-06-11
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2.09-363-399A-153/c
7. Sequence 153, Application US/09363939A
7. Patent No. 6346611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FEATURE:
| NAME/KEY: misc feature
| LOCATION: (1)...(157032)
| OTHER INFORMATION: n = A,T,C or G
| US-09-949-016-16502
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ORGANISM: Artificial Sequence
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APPLICANT: Pagrati
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Sequence 8885, Application US/10131827

| Sequence 8885, Application US/10131827
| Sequence 8885, Application US/10131827
| Sequence 8885, Application US/10131827
| Sequence 8885, Application US/10131827
| Septicant: Woodward, Robert APPLICANT: Woodward, Robert APPLICANT: Woodward, Robert APPLICANT: Ly, Wigc.
| TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING AND MONITORING AUTOINMUNER: US/10/131,827
| TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES TITLE OF INVENTION NUMBER: US/10/131,827
| CURRENT APPLICATION NUMBER: US 60/296,764
| PRIOR PLING DATE: 2001-10-22 | PRIOR PAPLICATION NUMBER: US 60/296,764
| PRIOR APPLICATION NUMBER: US 60/2
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Sequence 21757, Application US/09949016

Sequence 21757, Application US/09949016

Sequence 21757, Application US/09949016

SENERAL INFORMATION:

APPLICANT: VENTER,

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REPRENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR PAPLICATION NUMBER: 60/211,755

PRIOR PLING DATE: 2000-10-20

PRIOR PLING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 21757
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                                Indels
   Best Local Similarity 88.2%; Pred. No. 7e+02;
Matches 15; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; LOCATION: (1)._(524); OTHER INFORMATION: n =A, C, T or US-10-131-827-8885
                                                                                                                                                       262 CACTCCTATCCATACTC 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    462 CACTCCTATCCATACTC 478
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                                                                                               2 CACACCTATTCATACTC 18
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LOCATION: (1)..(524)
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Best Local Similarity
Matches 15; Conserva
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US-10-131-827-8885
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APPLICANT: Fry, Kirk
APPLICANT: Fry, Kirk
APPLICANT: Woodward, Robert
APPLICANT: Ly, Ngoc
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING AND MONITORING AUTOIMMUNE
TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES
TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES
TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES
CURRENT APPLICATION NUMBER: US/10/131,827
CURRENT FILING DATE: 2002-09-06
PRIOR FILING DATE: 2001-10-22
PRIOR FILING DATE: 2001-10-22
PRIOR FILING DATE: 2001-06-08
NUMBER OF SEQ ID NOS: 9090
SOFTWARE: PATENTIN Verbion 3.1
SEQ ID NO 8755
LENGTH 496
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| Patent No. 6639063
| GENERAL INFORMATION:
| APPLICANT: Under Milne Edwards, J.B. APPLICANT: Glordano, J.Y. TITLE OF INFORTON: ESTS and Encoded Human Proteins.
| TITLE OF INFORTON: ESTS and Encoded Human Proteins.
| TITLE REFERENCE: GENSET.054PR2
| CURRENT APPLICATION NUMBER: US/09/621,976
| CURRENT FILING DATE: 2000.07-21
| NUMBER OF SEQ ID NOS: 19335
| SEQ ID NO 15284
| LENGTH: 295
                                                                                                                                                                                                                                                         Score 13.8; DB 3;
Pred. No. 6.6e+02;
0; Mismatches 2;
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Patent No. 6905827
PERERAL INFORMATION:
APPLICANT: Wohlgemuth, Jay
                                                                                                                            ; TYPE: DNA
; ORGANISM: Drosophila melanogaster
US-09-270-767-30909
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                                                                                                                                                                                                                                                         76.7%;
88.2%;
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Best Local Similarity 88.2%
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30909
LENGTH: 273
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US-10-131-827-8755/c
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US-09-621-976-15284
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88.2%;
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Best Local Similarity 88.2
Matches 15, Conservative
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Best Local Similarity 88.2
Matches 15, Conservative
                                                             RESULT 53
US-09-949-016-23388/c
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ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Human
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Fatent No. 6812339
GENERAL INCORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT PILING DATE: 2000-04-14
FRIOR APPLICATION NUMBER: 60/211,755
FRIOR APPLICATION NUMBER: 60/237,768
FRIOR APPLICATION NUMBER: 60/237,768
FRIOR FILING DATE: 2000-10-03
FRIOR APPLICATION NUMBER: 60/231,498
FRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOCTUMARE: FESTSEQ for Windows Version 4.0
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Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER,
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REPRENCE: CLOOL3307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-00-09
PRIOR FILING DATE: 2000-00-09
PRIOR FILING DATE: 2000-00-09
NUMBER OF SEQ ID NOS: 207012
SOCTHWARE: RESESEQ FOR Windows Version 4.0
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                         Indels
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Best Local Similarity 88.2%; Pred. No. 7.1e+02;
Matches 15; Conservative 0; Mismatches 2;
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Pred. No. 7.1e+02;
0; Mismatches 2;
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Best Local Similarity 88.2%;
Matches 15; Conservative
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US-09-949-016-21758
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US-09-949-016-21759
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US-09-949-016-21759
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Sequence 23388, Application US/09949016

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CLOOU3307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

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LENGTH: 601
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(US-09-940-16-36971/C

(US-09-940-16-36971, Application US/09949016

(US-09-940-16-36971, Application US/09949016

(US-09-940-16-36971, Application US/09949016

(USEQUENCE 3000-10-10

(USECTION OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

(UTILE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

(UTRENT APPLICATION NUMBER: US/09/949,016

(URRENT FILING DATE: 2000-04-14

(URRENT FILING DATE: 2000-10-20

(URRENT APPLICATION NUMBER: 60/237,768

(URRENT PRIOR PILING DATE: 2000-10-03

(URRENT APPLICATION NUMBER: 60/237,768

(URRENT PRIOR PILING DATE: 2000-09-08

(URRENT APPLICATION NUMBER: 60/231,498

(URRENT APPLICATION N
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Pred. No. 7.1e+02;
0; Mismatches 2; Indels
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US-09-949-016-67685/c
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Query Match 76.7%; Score 13.8; DB 3; Best Local Similarity 88.2%; Pred. No. 7.1e+02; Matches 15; Conservative 0; Mismatches 2;
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Best Local Similarity
Matches 15; Conservat
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US-09-949-016-105324
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ORGANISM: Human
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US-09-949-016-67686/C
; Sequence 67686, Application US/09949016
; Sequence 67686, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
    APPLICANT: VENTER, US CRAIG et al.
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR PILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR PILING DATE: 2000-0-09
; RIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; RIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
Sequence 67685, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILLE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 67685

LENGTH: 601
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US-09-949-016-86494/c
| Sequence 86494, Application US/09949016
| Patent No. 6812339
| GENERAL INFORMATION:
| APPLICANT: VEWTER, J. Craig et al.
| TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
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88.2%; Pred. No. 7.1e+02;
iive 0; Mismatches 2;
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88.2%; Pred. No. 7.1e+02;
Live 0; Mismatches 2;
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Best Local Similarity 88.27
Best Local Similarity 18.27
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Best Local Similarity 88.2
Matches 15; Conservative
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CRGANISM: Human
US-09-949-016-67686
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US-09-949-016-105324/c

US-09-949-016-105324/c

Sequence 105324, Application US/09949016

Patent No. 661239

GENERAL INFORMATION:

PAPLICATW: VENTER, J. Craig et al.

APPLICATW: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WIMBER: US/09/949,016

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT PILING DATE: 2000-10-10

PRIOR FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 105324
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REPERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-08
RIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 86494
LENGTH: 601
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Facent No. 6812339
GENERAL INFORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT APPLICATION WUMBER: US/09/949,016
CURRENT FILLING DATE: 2000-40-14
FRIOR APPLICATION NUMBER: 60/241,755
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Sequence 153387, Application US/09949016
; Sequence 153387, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
    APPLICAMT: VENTER, J. Craig et al.
    ATTLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
    CURRENT APPLICATION NUMBER: 00/241, 755
    RIOR APPLICATION NUMBER: 60/231, 768
    PRIOR PILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231, 498
    PRIOR PILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 153387
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76.7%; Score 13.8; DB 3;
Best Local Similarity 88.2%; Pred. No. 7.1e+02;
Matches 15; Conservative 0; Mismatches 2;
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
LENGTH: 601
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Best Local Similarity 88.2
Matches 15; Conservative
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; ORGANISM: Human
US-09-949-016-144569
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US-09-949-016-153387
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; ORGANISM: Human
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US-10-424-599-1337447
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3: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
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10: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
                   GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd
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US-10-060-036-3000
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US-10-060-036-3010
US-10-060-036-3644
US-10-060-036-3941
US-10-060-036-4930
US-10-060-036-4930
US-10-954-456-215
US-09-954-456-2125
US-09-954-456-2125
US-09-954-456-2125
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US-10-843-641A-21369
US-10-843-641A-21369
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Maximum Match 100%
Listing first 150 summaries
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seq length: 200000000
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4802, Ap 293390,

Sequence

12484, 143110,

Score

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134872,

208289

790417, 832759, 753972,

634274

Sequence

Sequence Sequence

Sequence

523202, 523203,

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Sequence

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APPLICANT: Kalos, Michael D.
APPLICANT: Lodge, Michael J.
APPLICANT: Lodge, Michael J.
APPLICANT: Hepler, William T.
APPLICANT: Jang, Yugiu H.
APPLICANT: Jing, Yugiu T.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER FILE REFERENCE: 210121.566
CURRENT FILING DATE: 2002-01-30
NUMBER OF SEQ ID NOS: 4560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Benson, Darin R.
APPLICANT: Benson, Darin R.
APPLICANT: Kalos, Michael D.
APPLICANT: Lodges, Michael J.
APPLICANT: Dersing, David H.
APPLICANT: Hepler, William T.
APPLICANT: Hepler, William T.
APPLICANT: Hepler, William T.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER; TITLE OF INVENTION: LONGOSITIONS OF PANCREATIC CANCER; CURRENT FILING DATE: 2002-01-30; CURRENT FILING DATE: 2002-01-30; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0%; Pred. No. 30;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          Length 18;
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                                                                                                                                                                                                                                                                                                  ; FEATURE:
; OTHER INFORMATION: extension oligonucleotide
US-10-607-806-38
CURRENT APPLICATION NUMBER: US/10/607,806
CURRENT FILING DATE: 2003-06-27
PRIOR PILING DATE: 2003-06-27
NUMBER OF SEQ ID NOS: 78
SOFTWARE: PASSEQ for Windows Version 4.0
SEQ ID NO 38
LENGTH: 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
US-10-060-036-3000
Sequence 3000, Application US/10060036
; Publication No. US20030073144A1
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
CORGANISM: Homo sapiens
US-10-060-036-3000
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US-10-060-036-3110
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                                   Sequence 33013, A Sequence 33014, A Sequence 33014, A Sequence 36619, A Sequence 36620, A Sequence 36620, A Sequence 36620, A
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Sequence 8711, Ap
Sequence 64744, A
Sequence 1551, Ap
Sequence 17059, A
Sequence 59141, A
Sequence 59144, A
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Sequence 117894,
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Sequence 101328,
Sequence 101327,
Sequence 101328,
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Sequence 766178,
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US-10-607-806-38

Sequence 38, Application US/10607806

Publication No. US20050014158A1

GENERAL INFORMATION:

APPLICANT: Adam, Gail Isabel Reid

APPLICANT: Denissenko, Mikhali F.

APPLICANT: Denissenko, Mikhali F.

APPLICANT: Cantor, Charles

APPLICANT: Rubin, Byron

TITLE OF INVENTION: THERAPEUTIC METHODS FOR REDUCING FAT

TITLE OF INVENTION: DEPOSITION AND TREATING ASSOCIATED CONDITIONS

FILE REFERENCE: 524592003200
                                                                                                                                                                                                                                             Sequence 3
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Sequence
Sequence
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        US-09-925-065A-825175
US-10-363-445A-33013
US-10-363-445A-33013
US-10-363-448A-33013
US-10-363-483A-36104
US-10-363-483A-36619
US-10-363-483A-36619
US-10-363-483A-36619
US-10-363-483A-36620
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US-10-925-065A-9465510
US-09-925-065A-947038
US-09-925-065A-870183
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US-10-027-632-101328
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JOURNAMY: BEAGERON, Darin R.

APPLICANT: Kalos, Michael D.

APPLICANT: Landes, Michael J.

APPLICANT: Dersing, Michael J.

APPLICANT: Dersing, Milliam T.

APPLICANT: Hepler, William T.

APPLICANT: Hepler, William T.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER

TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER

TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER

CURRENT APPLICATION NUMBER: US/10/060,036

CURRENT FILING DATE: 2002-01-30

NUMBER OF SEQ ID NOS: 4560

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 4030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Benson, Darin R.
APPLICANT: Kalos, Michael D.
APPLICANT: Lodges, Michael J.
APPLICANT: Lodges, Michael J.
APPLICANT: Dersing, Vadiu
APPLICANT: Hepler, William T.
APPLICANT: Hepler, William T.
APPLICANT: Jang, Yuqiu
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: OWNERS: 210121.566
CURRENT PAPLICATION NUMBER: US/10/060,036
CURRENT PILIAN DATE: 2002-01-30
NUMBER OF SEQ ID NOS: 4560
SOFTWARRE: FastSEQ for Windows Version 4.0
SEQ ID NO 3941
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100.0%; Score 18; DB 5; Length 224; 100.0%; Pred. No. 30;
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Pred. No. 30;
; Mismatches 0
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Matches 18; Conservative
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Matches 18; Conservative
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; ORGANISM: Homo sapiens
US-10-060-036-3941
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; ORGANISM: Homo sapiens
US-10-060-036-4030
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Matches 18; Conserva
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; bublication No. US20030073144A1
; GENERAL INFORMATION:
    GENERAL INFORMATION:
    APPLICANT: Benson, Darin R.
    APPLICANT: Lodge, Michael D.
    APPLICANT: Lodge, Michael D.
    APPLICANT: Hepler, William T.
    APPLICANT: Hepler, William T.
    APPLICANT: Hepler, William T.
    APPLICANT: Jiang, Yuqiu
    TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
    TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
    TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER
    TITLE OF INVENTION: UNDERROUSIS OF PANCREATIC CANCER
    CURRENT APPLICATION NUMBER US/10/060,036
    CURRENT FILING DATE: 2002-01-30
    NUMBER OF SEQ ID NOS: 4560
    SEQ ID NO 3600
    SEQ ID NO 3600
    LENGTH: 224
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Sequence 3664. Application US/10060036

Publication No. US20030073144A1

SebrERAL INFORMATION:
APPLICANT: Benson, Darin R.
APPLICANT: Lodge, Michael D.
APPLICANT: Dersing, David H.
APPLICANT: Dersing, David H.
APPLICANT: OMPOSITIONS AND METHODS FOR THE THERAPY
ITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
ITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER
FILE REFERENCE: 210121.56

CURRENT FILING DATE: 2002-01-30

NUMBER OF SECTION OF
                                                                                                                                                                                                                                     Query Match 100.0%; Score 18; DB 5; Length 224; Best Local Similarity 100.0%; Pred. No. 30; Matches 18; Conservative 0; Mismatches 0; Indels
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100.0%; Pred. No. 30;
tive 0; Mismatches
SOFTWARE: FastSEQ for Windows Version 4.0
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Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                TYPE: DNA ORGANISM: Homo sapiens
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US-10-060-036-3600
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CORGANISM: Homo sapiens
US-10-060-036-3604
                                                                                                                                                                 US-10-060-036-3110
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                         SEQ ID NO 3110
LENGTH: 224
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LENGTH: 224
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100.0%; Score 18; DB 3; Length 562; 100.0%; Pred. No. 33;
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ilarity 100.0%; Pred. No. 32;
Conservative 0; Mismatches 0;
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NAME/KEY: misc feature
LOCATION: (416)
COTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: misc feature
LOCATION: (435)
COTHER INFORMATION: n equals a,t,g, or c
LOCATION: (435)
COTHER INFORMATION: n equals a,t,g, or c
LOCATION: NAME/KEY: misc feature
LOCATION: TOTHER INFORMATION: n equals a,t,g, or c
US-09-925-297-414
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; Sequence 822, Application US/09954456
; Patent No. US20020115057A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                   282 CCACACCTATTCATACTC 299
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Matches 18; Conservative
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US-09-954-456-216
                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 18; Conserva
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                                                               Sequence 153893, Application US/10425115
Publication No. US20040214272A1
Publication No. US20040214272A1
Publication No. US20040214272A1
APPLICANT: La Rosa, Thomas J.
APPLICANT: Enow, Yihua
APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: Blou, Yihua
APPLICANT: APPLICANT: Ba-21 (52222)
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21 (52222)
CURRENT APPLICATION NUMBER: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
ENOMBER OF SEQ ID NOS: 369326
LENGTH: 427
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Sequence 414. Application US/09925297

Batent No. US20020081659A1

GENERAL INFORMATION:

APPLICANT: ROSEN et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA105

CURRENT APPLICATION NUMBER: US/09/925,297

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05989

PRIOR PILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 928

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 414
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 18; DB 8; Length 427; Best Local Similarity 100.0%; Pred. No. 32; Matches 18; Conservative 0; Mismatches 0; Indels
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; OTHER INFORMATION: Clone ID: MRT4577_7192C.1
US-10-425-115-153893
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OTHER INPORMATION: n equals a,t,g, o
NAME/KEY: misc feature
LOCATION: (341)
OTHER INPORMATION: n equals a,t,g, o
NAME/KEY: misc feature
LOCATION: (344)
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LOCATION: (243)
OTHER INFORMATION: n equals a,t,g,
NAME/KEY: misc feature
LOCATION: (256)
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OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n equals a,t,g,
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NAME/KEY: misc feature
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                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Zea mays
                                      RESULT 8
US-10-425-115-153893
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US-09-925-297-414
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Jeffrey J. Seilhamer
TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF BLOOD CELL
GENE EXPRESSION
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COMPUTER: IBW PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/641,643
FILING DATE: 14-Aug-2003
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 562;
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CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 7;
ilarity 100.0%; Pred. No. 33;
Conservative 0; Mismatches 0
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NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0001 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLONE: 9190012
SEQUENCE DESCRIPTION: SEQ ID NO: 1200 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1200, Application US/10641643
Publication No. US20040077003A1
GENERAL INFORMATION:
APPLICANT: Cocks, Benjamin G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (650) 845-4166
                                                                                                                                                                                                                                                                                                                                      313 CCACACCTATTCATACTC 330
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 562 base pairs
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PRIOR FILING DATE: 2000-09-27
NUMBER OF SEQ ID NOS: 2276
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 1225
LENGTH: 562
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COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                   Conservative
                                                                                                            TYPE: DNA
CORGANISM: Homo sapiens
US-09-954-456-1225
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IMMEDIATE SOURCE:
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Best Local Similarity
Matches 18; Conserval
                                                                                                                                                                                                                         Best Local Similarity
Matches 18; Conserv
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                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
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                  TITLE OF INVENTIÓN: Process for Identifying Anti-Cancer Therapeutic Agents Using Cand
TITLE OF INVENTION: Sets
FILE REFERENCE: 689290-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Young, Paul
TITLE OF INVENTION: Process for Identifying Anti-Cancer Therapeutic Agents Using Canc
TITLE OF INVENTION: Sets
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                                                                            CURRENT APPLICATION NUMBER: US/09/954,456
CURRENT FILING DATE: 2001-09-18
PRIOR FILING DATE: 2001-09-18
PRIOR FILING DATE: 2001-09-18
PRIOR FILING DATE: 2000-09-18
PRIOR FILING DATE: 2000-09-20
PRIOR FILING DATE: 2000-09-25
PRIOR FILING DATE: 2000-09-26
PRIOR FILING DATE: 2000-09-27
PRIOR FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US/60/235,710
PRIOR APPLICATION NUMBER: US/60/235,720
PRIOR FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1225, Application US/09954456 Patent No. US20020115057A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
US-09-954-456-822
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LENGTH: 562
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GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using FILE REFERENCE: 689290-189

CURRENT PER STATE OF UNUMBER: US/010/0843,641A

CURRENT FILING DATE: 2010-166-05

PRIOR APPLICATION NUMBER: US/09/954,531

PRIOR APPLICATION NUMBER: US/09/954,456

PRIOR PELING DATE: 2010-09-18

PRIOR PELING DATE: 2010-09-25

PRIOR PELING DATE: 2010-09-26

PRIOR PELING DATE: 2010-09-28

PRIOR PELING DATE: 2010-10-28

PRIOR PELING DATE: 2010-10-28

PRIOR PELING DATE: 2010-10-02

PRIOR APPLICATION NUMBER: US/09/969,768

PRIOR APPLICATION NUMBER: US/09/969,708

PRIOR PELING DATE: 2001-10-03

PROPER 
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Publication No. US20050064454A1
GENERAL INFORMATION:
TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using TITLE OF INVENTION: Signature Gene Sets
FILE REFERENCE: 689290-189
CURRENT APPLICATION NUMBER: US/10/843,641A
                                                                                                                                                                                 Query Match 100.0%; Score 18; DB 9; Length 562; Best Local Similarity 100.0%; Pred. No. 33; Matches 18; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3849, Application US/10843641A Publication No. US20050064454A1 GENERAL INFORMATION:
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100.0%; Pr
tive 0;
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Best Local Similarity 100.
Matches 18; Conservative
LENGTH: 562
TYPE: DNA
ORGANISM: Homo sapiens
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US-10-843-641A-3849
                                                                                            RESULT 16
US-10-843-641A-3849
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APPLICANT: Avalon Pharmaccuticals, Inc.

TITLE OF INVENTION:

TITLE OF INVENTION:

TITLE OF INVENTION:

Signature Gene Sets

TITLE OF INVENTION:

Signature Gene Sets

TITLE OF INVENTION:

CURRENT APPLICATION NUMBER: US/10/843,641A

CURRENT APPLICATION NUMBER: US/09/873,367

PRIOR PILING DATE: 2001-06-05

PRIOR APPLICATION NUMBER: US/09/954,456

PRIOR APPLICATION NUMBER: US/09/954,456

PRIOR APPLICATION NUMBER: US/09/952,436

PRIOR APPLICATION NUMBER: US/09/952,436

PRIOR APPLICATION NUMBER: US/09/962,436

PRIOR APPLICATION NUMBER: US/09/962,832

PRIOR APPLICATION NUMBER: US/09/962,832

PRIOR APPLICATION NUMBER: US/09/962,832

PRIOR APPLICATION NUMBER: US/09/962,832

PRIOR APPLICATION NUMBER: US/09/963,937

PRIOR PILING DATE: 2001-09-28

PRIOR PILING DATE: 2001-10-02

PRIOR APPLICATION NUMBER: US/09/969,037

PRIOR PILING DATE: 2001-10-02

PRIOR APPLICATION NUMBER: US/09/969,708

PRIOR PILING DATE: 2001-10-03

PROMPRE OF SEQ ID NOS: 8447

**SEQ ID NO 3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                  Sequence 3, Application US/10607806

Sequence 3, Application US/10607806

Publication No. US200500141581

GENERAL INFORMATION:

APPLICANT: Adam, Gail Isabel Reid

APPLICANT: Langdown, Maria L.

APPLICANT: Denissenko, Mikhali F.

APPLICANT: Denissenko, Mikhali F.

APPLICANT: Denissenko, Mikhali F.

APPLICANT: Cantor, Charles

APPLICANT: Cantor, Charles

APPLICANT: Cantor, Charles

APPLICANT: Rubin, Byron

ITILE OF INVENTION: THERAPEUTIC METHODS FOR REDUCING FAT

ITILE OF INVENTION: DESOLOSON

CURRENT APPLICATION NUMBER: US/10/607,806

CURRENT APPLICATION NUMBER: US/10/607,806

CURRENT FILING DATE: 2002-06-27

PRIOR FILING DATE: 2002-06-27

PRIOR FILING DATE: 2002-06-27

NUMBER OF SEQ ID NOS: 78

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 3

LENGTH: 562
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               313 CCACACCTATTCATACTC 330
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Best Local Similarity 100.0
Matches 18, Conservative
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                                                                                                                           RESULT 14
US-10-607-806-3
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Gaps ; 0

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APPLICANT: Specit, Thomas
APPLICANT: Specit, Armin
APPLICANT: Hinzmann, Bernd
APPLICANT: Hinzmann, Bernd
APPLICANT: Shemitt, Armin
APPLICANT: Pilarsky, Christian
APPLICANT: Dahl, Edgar
APPLICANT: Rosenthal, Andre
APPLICANT: Rosenthal, Andre
TITLE OF INVENTION: Tissue
FILE REFERENCE: ALBRE-2D1
CURRENT FILING DATE: 2002-12-30
PRIOR APPLICATION NUMBER: US 09/647,801
PRIOR PILING DATE: 2000-12-20
NUMBER OF SEQ ID NOS: 71
SEQ ID NO 6
LENGTH: 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 18; DB 6; Length 644; 100.0%; Pred. No. 33;
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        TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
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; Publication No. US20050196754A1
; GENERAL INFORMATION:
APPLICANT: HYSEG, INC.
TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
100.0%; Score 18; DB 3;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 18; Conservative 0; Mismatches 0
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                          FILE REFERENCE: PA105
CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 928
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 52
LENTH: 630
                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: misc feature
LOCATION: (556)
OTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) LOCATION: (628)
; OTHER INFORMATION: n equals a,t,g, or c
US-09-925-297-52
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, Sequence 6, Application US/10330051A
, Publication No. US20040002471A1
, GENERAL INFORMATION:
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Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: homo sapiens
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US-10-450-763-11903
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| Sequence 27, Application US/10712124
| Publication No. US20040146907A1
| GENERAL INFORMATION:
| APPLICANT: SMITH, VICTORIA
| TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DETECTING DYSPLASIA
| FILE REFERENCE: P2000R1
| CURRENT APPLICATION NUMBER: US/10/712,124
| CURRENT PILING DATE: 2003-11-13
| PRIOR FILING DATE: 2003-11-13
| NUMBER OF SEQ ID NOS: 123
| SEQ ID NO 27
| LENGTH: 585
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 8447
SOFTWARE: PatentIn version 3.0
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Mismatches
CURRENT FILING DATE: 2004-05-12
PRIOR APPLICATION NUMBER: US/09/873,367
PRIOR PELLING DATE: 2001-06-05
PRIOR FILING DATE: 2001-06-05
PRIOR PELLING DATE: 2001-09-18
PRIOR PELLING DATE: 2001-09-25
PRIOR PELLING DATE: 2001-09-25
PRIOR FILING DATE: 2001-09-25
PRIOR PELLORITON NUMBER: US/09/967,768
PRIOR PELLING DATE: 2001-09-27
PRIOR PELLING DATE: 2001-09-27
PRIOR FILING DATE: 2001-09-28
PRIOR FILING DATE: 2001-09-28
PRIOR PELLORITON NUMBER: US/09/969,776
PRIOR PELLORITON NUMBER: US/09/969,347
PRIOR PELLING DATE: 2001-09-28
PRIOR PELLING DATE: 2001-10-02
PRIOR PELLING DATE: 2001-10-02
PRIOR PELLING DATE: 2001-10-02
PRIOR PILLING DATE: 2001-10-02
PRIOR PILLING DATE: 2001-10-02
PRIOR FILLING DATE: 2001-10-03
PRIOR FILLING DATE: 2001-10-03
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100.0%; Score 18;

Best Local Similarity 100.0%; Pred. No. Matches 18; Conservative 0; Mismatch
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US-10-712-124-27
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US-09-925-297-52
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LENGTH: 562
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TYPE: DNA

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Sequence 935053, Application US/09925065A

Publication No. US2005028172A9

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome

FILE REFERENCE: 108827.135

CURRENT APPLICATION NUMBER: US/09/925,065A

CURRENT FILING DATE: 2001-08-08

PRIOR FILING DATE: 2000-10-24

PRIOR FILING DATE: 2000-11-20

PRIOR FILING DATE: 2000-11-30

PRIOR FILING DATE: 2000-11-30

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16
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91.1%; Score 16.4; DB 4; Length 586;
Best Local Similarity 94.4%; Pred. No. 2.2e+02;
Matches 17; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 18; DB 8;
100.0%; Pred. No. 43;
tive 0; Mismatches 0
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                                                                                    NAME/KEY: misc_feature
LOCATION: 7256
OTHER INFORMATION: y = C or T
                                                                                                                                                                                                                                                                                        FEATURE:

NAME/KEX: misc_feature

LOCATION: (7301)...(7301)

OTHER INFORMATION: m = A or C
                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature LOCATION: (732\overline{9})...(7328) OTHER INFORMATION: r = A or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature LOCATION: (806\overline{2})...(8062) OTHER INFORMATION: y = C or T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature

LOCATION: (11649)

CTHER INFORMATION: m = A or C

US-10-607-806-1
                                                                                                                                                                                                                                                           OTHER INFORMATION: m = A or C
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                                      INFORMATION: y = C or T
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Best Local Similarity 100.0
Matches 18; Conservative
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LOCATION: (9182)...(9182)
OTHER INFORMATION: k = G
                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: 7300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: SIMILAR

LOCATION: (1)..(711)

OTHER INFORMATION: 87% homologous to Homo sapiens syntaxin 8,accession number

OTHER INFORMATION: AF036715,Smith-Waterman Score=1008.
US-10-450-763-11903
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Sequence 1, Application US/10607806

Publication No. US20050014158A1

GENERAL INFORMATION:

APPLICANT: Adam, Gail Isabel Reid

APPLICANT: Dennis, Edward

APPLICANT: Dennis, Edward

APPLICANT: Cantor, Charles

APPLICANT: Rubin, Byron

TITLE OF INVENTION: THERAPEUTIC METHODS FOR REDUCING FAT

TITLE OF INVENTION: DEPOSITION AND TREATING ASSOCIATED CONDITIONS

FILE REFERENCE: 524592003200

CURRENT FILING DATE: 2003-66-27

PRIOR APPLICATION NUMBER: 60/392,362

PRIOR APPLICATION NUMBER: 60/392,362

PRIOR APPLICATION NUMBER: 60/392,362

NUMBER OF SEQ ID NOS: 78

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1

LENGTH: 12174

TYPE: DNA

ORGANISM: Homo sapiens
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100.0%; Score 18; DB 9; Length 654;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 18; Conservative 0; Mismatches 0; Indels
FILE REFERENCE: 790CIP3/US
CURRENT APPLICATION NUMBER: US/10/450,763
CURRENT FILING DATE: 2003-06-11
PRIOR PILING DATE: 2001-03-30
PRIOR FILING DATE: 2001-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR PILING DATE: 2000-08-23
NUMBER OF SEQ ID NOS: 60736
SOFTWARE: CUSTOM
LENGTH: 654
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LOCATION: 6282
OTHER INFORMATION: m = A or C
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LOCATION: (4050)...(4050)
OTHER INFORMATION: m = A or C
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US-10-607-806-1
                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
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Gaps

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91.1%; Score 16.4; DB 4; Length 586; 94.4%; Pred. No. 2.2e+02;
                                                                0; Mismatches
                                                                                                                                                                          320 CCACACCTATTCATACAC 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158 CCACACCTATTCATACAC 141
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94.4%;
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Best Local Similarity 94.4
Marches 17; Conservative
                                     Best Local Similarity 94.4
Matches 17; Conservative
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Matches 17; Conservative
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CORGANISM: Homo sapiens
US-09-925-065A-919397
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      Query Match
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GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Mucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION NUMBER: US 60/243,096; PRIOR FILING DATE: 2000-10-24; PRIOR PELIGATION NUMBER: US 60/252,147; PRIOR FILING DATE: 2000-11-30; PRIOR PELING DATE: 2000-11-30; PRIOR PELING DATE: 2000-11-30; PRIOR PELING DATE: 2001-10-30; PRIOR FILING DATE: 2001-10-30; PRIOR FILING DATE: 2001-10-10; PRIOR FILING DATE: 2001-01-10; PRIOR FILING DATE: 2001-05-09; PRIOR APPLICATION NUMBER: US 60/289,846
                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-46
PRIOR FILING DATE: 2001-01-6
PRIOR PRIOR DATE: 2001-01-6
PRIOR PRIOR DATE: 2001-01-6
PRIOR PRIOR DATE: 2001-01-16
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Pred. No. 2.2e+02;
0; Mismatches 1; Indels
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 952779
LENGTH: 586
                                                                                                                                                                                                                                                            ; Sequence 935054, Application US/09925065A; Publication No. US20050228172A9; GENERAL INFORMATION:
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                                     CCACACCTATTCATACTC 18
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Best Local Similarity 94.4%;
Matches 17; Conservative (
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US-09-925-065A-952779
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WESULT 26
US-09-925-065A-919397/C

$ Sequence 919397/C

$ Sequence 91999/C

$ Sequence 910 No 91939/C

$ Sequence 910 No 91930/C

$ Sequence 910 No 91
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 16.4; DB 4; Length 770;
Pred. No. 2.3e+02;
0; Mismatches 1; Indels C
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Sequence 205, Application US/10482029
Fublication No. US20050037445A1
GENERAL INFORMATION:
APPLICANT: ODIN medical A/S
TITLE OF INVENTION: Oncology drug innovation
FILE REFERENCE: P 573 PC00
CURRENT APPLICATION NUMBER: US/10/482,029
CURRENT FILING DATE: 2003-12-29
NUMBER OF SEQ ID NOS: 437
SEQ ID NO 205
LENGTH: 251199
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Publication No. US20040214272A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: La Rosa, Thomas J.
APPLICANT: Cao, Vanic, Vihua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants
FILE REPERENCE: 38-21(5322)B
CURRENT APPLICATION NUMBER: US/10/425,115
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 33674
LENGTH: 533
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; Sequence 459786, Application US/09925065A
; Publication No. US20050228172A9
; GENERAL INFORMATION:
    APPLICANT' WARD.
    TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
; TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
; TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
; TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
; TILL REFERENCE: 108827.135
; CURRENT FILING DATE: 2000-8-08
; PRIOR APPLICATION NUMBER: US 60/25, 147
; PRIOR FILING DATE: 2000-11-20
; PRIOR FILING DATE: 2000-11-20
; PRIOR FILING DATE: 2000-11-16
; PRIOR FILING DATE: 2001-01-16
; PRIOR APPLICATION NUMBER: US 60/250, 092
; PRIOR FILING DATE: 2001-01-16
; PRIOR FILING DATE: 2001-05-09
; NUMBER OF SEQ ID NOS: 957086
; SEQ ID NO 459786
; LENGHAL: 567
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85.6%; Score 15.4; DB 4; Length 567;
Best Local Similarity 94.1%; Pred. No. 7.46+02;
Matches 16; Conservative 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85.6%; Score 15.4; DB 8; Length 533; 94.1%; Pred. No. 7.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Clone ID: MRT4577_130716C.1
US-10-425-115-33674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-925-065A-366085; Sequence 366085, Application US/09925065A; Publication No. US20050228172A9; GENERAL INFORMATION: APPLICANT: Wang, David G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              136 CACACCTATCCATACTC 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
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Best Local Similarity 94.19
Matches 16; Conservative
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ORGANISM: Zea mays
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Publication No. US20040031072A1

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
JAPLICANT: La Rosa Thomas J
APPLICANT: APPLICANT: AND STANDAR APPLICANT: APPLICANT: Can Vihua
APPLICANT: Can Vihua
APPLICANT: Can Vihua
APPLICANT: Can Vihua
APPLICANT: APPLICANT: APPLICANT: APPLICANT: Can Vingent and Uses Thereof for Plant Improvement
TITLE OF INVENTION: 99, Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: 9121233 B
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
CURRENT APPLICANTON NUMBER: US/10/424,599

CURRENT APPLICANTON NUMBER: US/10/424,599

NUMBER OF SEQ ID NOS: 285684

LENGTH: 321
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                                                                                                                                                                                    JOURGALL IN CORTAIN R.

APPLICANT: Kalos, Michael D.

APPLICANT: Lodges, Michael D.

APPLICANT: Lodges, Michael J.

APPLICANT: Lodges, Michael J.

APPLICANT: Legeler, William T.

APPLICANT: Hepler, William T.

APPLICANT: Hepler, William T.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER

FILE REFERENCE: 210121.566

CURRENT APPLICATION NUMBER: US/10/060,036

CURRENT FILING DATE: 2002-01-30

NUMBER OF SEQ ID NOS: 4560

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85.6%; Score 15.4; DB 7; Length 321; 94.1%; Pred. No. 7e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match

88.9%; Score 16; DB 5; Length 224;
Best Local Similarity 94.1%; Pred. No. 3.38+02;
Matches 16; Conservative 0; Mismatches 1; Indels
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US-10-424-599-127447
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US-10-425-115-33674
; Sequence 33674, Application US/10425115
                                                                                                      Sequence 518, Application US/10060036
Publication No. US20030073144A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:

NAME/KEY: misc_feature

LOCATION: 20, 53, 56, 58, 59

OTHER INFORMATION: n = A,T,C or G
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Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo sapiens
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US-10-424-599-127447
                                                                                 JS-10-060-036-518
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 15.4; DB 5; Length 1202;
Pred. No. 7.9e+02;
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TITLE OF INVENTION: Identification and Mapping of Single N.
TITLE OF INVENTION: Identification and Mapping of Single N.
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REPERBERS: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR PILING DATE: 2000-03-29
PRIOR PELING DATE: 2000-03-29
PRIOR PELING DATE: 2000-03-29
PRIOR PELING DATE: 1000-02-24
PRIOR PELING DATE: 1099-11-23
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR PELING DATE: 1999-09-28
PRIOR PILING DATE: 1999-09-28
PRIOR PILING DATE: 1999-09-28
PRIOR PILING DATE: 1999-08-08
PRIOR FILING DATE: 1999-08-08
PRIOR PILING DATE: 1999-08-08
PRIOR FILING DATE: 1999-08-08
PRIOR FILING DATE: 1999-08-08
PRIOR FILING DATE: 1999-08-08
PRIOR PILING DATE: 1999-08-08-09
          Polymorphisms in the Human Genome
                                                                                                                               PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR PILING DATE: 2000-07-12
PRIOR PILING DATE: 2000-04-20
PRIOR FILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 2000-03-29
PRIOR PILING DATE: 1999-11-23
PRIOR PILING DATE: 1999-11-23
PRIOR PILING DATE: 1999-09-28
PRIOR PILING DATE: 1999-09-28
PRIOR PILING DATE: 1999-09-09
PRIOR PILING DATE: 1999-09-09
PRIOR FILING DATE: 1999-09-09
NUMBER: OF SEQ ID NOS: 325720
SEQ ID NO 122849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 122850, Application US/10027632; Publication No. US20020198371A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      468 CACACCTATACATACTC 484
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94.1%;
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Best Local Similarity 94.1;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 94.1
Matches 16; Conservative
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; ORGANISM: Human
US-10-027-632-122849
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ORGANISM: Human
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; Publication No. US20040123340A1
; Publication No. US20040123340A1
; GENERAL INFORMATION:
; APPLICANT: Feng, Paul C.C.
; APPLICANT: Fincher, Karen L.
; APPLICANT: Fincher, Karen L.
; APPLICANT: Fincher, Todel E. Todel E.
; TITLE OF INVENTION: Plants
; TITLE OF INVENTION: Plants
; FILE REPREARME: 38-21(5224)B
; CURRENT APPLICATION NUMBER: US/10/021,323
; CURRENT FILING DATE: 2001-12-12
; PRIOR PILING DATE: 2000-12-14
; NUMBER OF SEQ ID NOS: 17880
; SEQ ID NOS: 17880
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TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
FILE REPERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-11-6
PRIOR FILING DATE: 2001-11-6
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 3001-01-6
PRIOR APPLICATION NUMBER: US 60/289,846
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 15.4; DB 4;
Pred. No. 7.4e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 122849, Application US/10027632
Publication No. US20020198371A1
GENERAL INFORMATION:
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ORGANISM: Gossypium hirsutum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo sapiens
US-09-925-065A-366085
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LENGTH: 603
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APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIP1300-3
CURRENT PAPLICATION NUMBER: US 60/227, 866
PRIOR FILING DATE: 2000-08-24
PRIOR FILING DATE: 2000-08-24
PRIOR FILING DATE: 2001-01-16
PRIOR PRILCATION NUMBER: US 60/264,647
PRIOR PILING DATE: 2001-01-16
PRIOR PRILCATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: S379
SEQ ID NOS: S379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 899, Application US/10767795
Fublication No. US20040181830A1
GENERAL INFORMATION:
APPLICANT: Kovalic, David K.
APPLICANT: Zhou, Yihua
TITLE OF INVENTION: NUCleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: NUCleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
CURRENT APPLICATION NUMBER: US/10/767,795
CURRENT FILING DATE: 2004-01-30
NUMBER OF SEQ ID NOS: 117596
SEQ ID NO 899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 85.6%; Score 15.4; DB 8; Length 1733; Best Local Similarity 94.1%; Pred. No. 8.2e+02; Matches 16; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                     85.6%; Score 15.4; DB 6; Length 1202; 94.1%; Pred. No. 7.9e+02; Live 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Clone ID: GOSHI-09MAY01-C13173_1
US-10-767-795-899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1570, Application US/09938842A Parent No. US20020160378A1 GENERAL INFORMATION:
APPLICANT: Harper, Jeff
                                                                                                                                                                                                                                                                                                                                                          468 CACACCTATACATACTC 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 CACACCTATTCATACTC 18
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ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Gossypium hirsutum
                                                                                                                                                      Ouery Match
Best Local Similarity 94.19
....hes 16; Conservative
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                                                                                                                   US-10-027-632-122850
                         LENGTH: 1202
TYPE: DNA
ORGANISM: Human
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SEQ ID NO 122850
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US-10-767-795-899
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                                                                                                                                                               Sequence 122849, Application US/10027632

Publication No. US20030204075A9

FURBEAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide

FILE OF INVENTION: Polymorphisms in the Human Genome

FILE REFERENCE: 108027.129

CURRENT APPLICATION NUMBER: US/10/027,632

CURRENT FILING DATE: 2000-04-30

FRIOR APPLICATION NUMBER: US 60/18,006

PRIOR APPLICATION NUMBER: US 60/18,676

PRIOR APPLICATION NUMBER: US 60/189,676

PRIOR APPLICATION NUMBER: US 60/189,18

PRIOR APPLICATION NUMBER: US 60/185,218

PRIOR APPLICATION NUMBER: US 60/185,38

PRIOR FILING DATE: 2000-03-29

PRIOR FILING DATE: 1999-11-23

PRIOR APPLICATION NUMBER: US 60/167,363

PRIOR PILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-08-09

NUMBER OF SEQ ID NOS: 325720

SOFTWARE FREESEQ FOR WINDOWS Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-02/-024-12850,

US-10-02/-024-12850,

Publication No. US2003020407549

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide

TITLE OF INVENTION: Polymorphisms in the Human Genome

FILE REFERENCE: 108827.129

CURRENT APPLICATION NUMBER: US/10/027,632

CURRENT FILING DATE: 2000-04-30

PRIOR APPLICATION NUMBER: US 60/198,676

PRIOR APPLICATION NUMBER: US 60/198,676

PRIOR APPLICATION NUMBER: US 60/198,218

PRIOR APPLICATION NUMBER: US 60/185,218

PRIOR FILING DATE: 2000-03-29

PRIOR FILING DATE: 2000-03-24

PRIOR FILING DATE: 12000-02-24

PRIOR APPLICATION NUMBER: US 60/167,363

PRIOR APPLICATION NUMBER: US 60/167,363

PRIOR APPLICATION NUMBER: US 60/167,363

PRIOR FILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-09-28

PRIOR FILING DATE: 1999-09-08

NUMBER OF SEQ ID NOS: 325720

NUMBER OF SEQ ID NOS: 325720
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85.6%; Score 15.4; DB 6; Length 1202;
94.1%; Pred. No. 7.9e+02;
iive 0; Mismatches 1; Indels 0
468 CACACCTATACATACTC 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               468 CACACCTATACATACTC 484
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Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 37
US-10-027-632-122850
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Gaps

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WES-10-311-455-1691/c

Sequence 1691, Application US/10311455

Publication No. US2030143606A1

GENERAL INFORMATION:

APPLICANT: DIEBENBROCK, Christian

APPLICANT: DIEBENBROCK, Christian

APPLICANT: BIEBENBROCK, Christian

APPLICANT: BIEBENBROCK, Christian

APPLICANT: BIERING WITH

TITLE OF INVENTION: Oylosine methylation

FILE OF INVENTION: Oylosine methylation

FILE NEBERBROCE: 5013.1014

CURRENT APPLICATION NUMBER: US/10/311,455

CURRENT APPLICATION NUMBER: DE 10032529.7

PRIOR FILING DATE: 2001-07-02

PRIOR PLICATION NUMBER: DE 10032529.7

PRIOR PLICATION NUMBER: DE 10043826.1

PRIOR FILING DATE: 2000-09-01

NUMBER OF SEQ ID NOS: 2424

SEQ ID NO 1691

LENGTH: 17934
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US-10-721-693-10/c
IS-20-721-693-10/c
Sequence 10, Application US/10721693
Sequence 10, Application Wolf02255A1
GENERAL INFORMATION:
TAPLICANT: Meatmerer, William F.
TITLE OF INVENTION: STRAM
FILE REPERENCE: P11089-00
CURRENT APPLICATION NUMBER: US/10/721,693
CURRENT FILNG DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin version 3.1
SEQ ID NO 10
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NAME/KEY: misc_feature
LOCATION: (1)..(11877)
OTHER INFORMATION: LOCUS
OTHER INFORMATION: D24-JAN-2001
OTHER INFORMATION: D2 24-JAN-2001
OTHER INFORMATION: S.
OTHER INFORMATION: S.
OTHER INFORMATION: S.
OTHER INFORMATION: ACCESSION AF163865
DUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: AF163865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , OTHER INFORMATION: chemically treated genomic DNA (Homo sapiens) US-10-311-455-1691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 85.6%; Score 15.4; DB 6; Length 17934; Best Local Similarity 94.1%; Pred. No. 1e+03; Matches 16; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14397 CACACCTATACATACTC 14381
                               3067 CACACCTATTCCTACTC 3051
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 118777
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US-09-938-042A-1570/C

Sequence 1570, Application US/09938842A

Publication No. US20040009476A9

GENERAL INFORMATION:
APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joe1
APPLICANT: Zhu, TONG
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS
TITLE OF INVENTION: STRESS-REGULATED GENES OF USE
TITLE OF INVENTION: STRESS-REGULATED GENES OF USE
TITLE OF INVENTION: STRESS-REGULATED GENES OF USE
TITLE OF INVENTION NUMBER: US/09/938,842A
CURRENT APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2001-08-24
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR SEQ ID NO S: 5379

SEQ ID NO 1570

LUMBER OF SEQ ID NOS: 5379

LUMBER OF SEQ ID NOS: 5379

LUMBER OF SEQ ID NOS: 5379

LUMBER OF SEQ ID NOS: 5379
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Length 3093;
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ch 85.6%; Score 15.4; DB 3; Length 3
I Similarity 94.1%; Pred. No. 8.6e+02;
16; Conservative 0; Mismatches 1; Indels
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US-10-347-470A-1/C

Sequence 1, Application US/10347470A

Publication No. US20040002054A1

GENERAL INFORMATION:
APPLICANT: Horvitz, H. Robert
APPLICANT: Horvitz, H. Robert
TITLE OF INVENTION: SQV NUCLEIC ACIDS AND POLYPEPTIDES
FILE REFERENCE: 01997/542003
CURRENT FALING DATE: 2003-01-17
PRIOR APPLICATION NUMBER: US 60/349,630
PRIOR FILING DATE: 2002-01-18
PRIOR FILING DATE: 2002-01-18

PRIOR FILING DATE: 2002-06-24

NUMBER OF SEQ ID NOS: 81

SCRUMARE: FASESEQ for Windows Version 4.0
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85.6%; Score 15.4; DB 6;
Best Local Similarity 94.1%; Pred. No. 8.6e+02;
Matches 16; Conservative 0; Mismatches 1;
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                                                                                                                                                553 CCACACCTATTGATACT 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            553 CCACACCTATTGATACT 537
                                                                                                              1 CCACACCTATTCATACT 17
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                            Best Local Similarity
Matches 16; Conserv
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LENGTH: 3120
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RESULT 46

US-10-242-53SA-27057/c

is gequence 27057, Application US/10242535A

is gequence 27057, Application No. US20040013663A1

is gequence 27057, Application No. US20040013663A1

is GENERAL INFORMATION:

is APPLICANT: ChondroGene Inc.

is APPLICANT: Liew, C.C.

is TITLE OF INVENTION: Compositions and Methods Relatiing to Osteoarthritis

rile REPERRORC: 4231/2005

is TITLE OF INVENTION: UNMBER: US/10/242,535A

CURRENT FILING DATE: 2002-09-12

PRIOR FILING DATE: 2002-09-13

PRIOR FILING DATE: 2001-07-13

PRIOR PELING DATE: 2001-07-13

PRIOR PELING DATE: 2001-07-13

PRIOR FILING DATE: 2001-07-13

PRIOR FILING DATE: 2001-03-12

PRIOR FILING DATE: 2001-03-12
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APPLICANT: Liew, C.C.
TITLE OF INVENTION: Compositions and Methods Relating to Osteoarthritis
FILE REFERENCE: 4231/2002
CURRENT APPLICATION NUMBER: US/10/085,783A
CURRENT FILING DATE: 2002-02-28
PRIOR APPLICATION NUMBER: US 60/305,340
PRIOR PILING DATE: 2001-07-13
PRIOR PILING DATE: 2001-02-13
PRIOR PILING DATE: 2001-02-18
PRIOR FILING DATE: 2001-02-28
PRIOR FILING DATE: 2001-02-28
PRIOR FILING DATE: 2001-02-28
NUMBER: OF SEQ ID NOS: 58994
SOFTWARE: Patentin version 3.2
SEQ ID NO 27057
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                                                                                                                                                                                                                                                                                                                    Score 15.4; DB 5; Length 439892;
Pred. No. 1.38+03;
0; Mismatches 1; Indels 0;
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                                                                                                                                                              ; LOCATION: (1)...(439892)
; OTHER INFORMATION: n = A,T,C or G
US-10-087-192-454
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100.0%; Prr
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Best Local Similarity 94.1%;
Matches 16; Conservative
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                        NAME/KEY: misc_feature
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Matches 15; Conserv
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US-10-085-783A-27057/c
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US-10-242-535A-27057
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Sequence 10, Application US/10852997

Publication No. US20040220132A1

GENERAL INFORMATION:

APPLICANT: Medironic, Inc.

APPLICANT: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: (1)...(118777)
LOCATION: LOCUS
AF163865
OTHER INFORMATION: DO 24-JAN-2001
OTHER INFORMATION: DEFINITION Mus musculus alpha-synuclein (Snca) gene, complete cd
OTHER INFORMATION: ACCESSION AF163865
PUBLICATION INFORMATION: ACCESSION
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                                                                                     Gaps
Query Match 85.6%; Score 15.4; DB 7; Length 118777; Best Local Similarity 94.1%; Pred. No. 1.2e+03; Matches 16; Conservative 0; Mismatches 1; Indels 0;
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| Sequence 454, Application No. US20201825861
| General Information No. US20201825861
| General Information No. US20201825861
| APPLICANT: Moration Engelhard, Eric K. TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: OANCER | FILE REFERENCE: 529452000122 | CURRENT APPLICATION NUMBER: US/10/087,192 | CURRENT APPLICATION NUMBER: US/09/747,377 | PRIOR FILING DATE: 2000-12-22 | PRIOR FILING DATE: 2001-03-01 | PRIOR FILING DATE: 2001-03-02 | PRIOR FILING DATE: 2001-03-02 | PRIOR FILING DATE: 2001-03-02 | SOFTWARE: ReatsEQ for Windows Version 4.0 | SEQ ID NO 454 | LENGTH: 439892
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DATABASE ENTRY DATE: 2001-01-24
; BELEVANT RESIDUES: (1)..(118777)
US-10-852-997-10
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US-10-087-192-454
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258 CCACACCTATTCATA 244
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                                                      Query Match
Best Local Similarity 100.
Matches 15; Conservative
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Best Local Similarity 100.
Matches 15; Conservative
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US-09-925-065A-817639
     US-09-925-065A-817638
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; Sequence 78961, Application US/10425115
; Publication No. US20040214272A1
; Publication No. US200400214272A1
; Publication No. US200400214272A1
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants
; TITLE OF INVENTION: Numbers: US/10/425,115
; CURRENT APPLICATION NUMBER: US/10/425,115
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 78961
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Sequence 817638, Application US/09925065A

Publication No. US20050228172A9

GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135

CURRENT APPLICATION NUMBER: US/09/925.065A

PRIOR APPLICATION NUMBER: US 60/243.096

PRIOR FILING DATE: 2000-110-24

PRIOR PILING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-46

PRIOR PILING DATE: 2001-01-66

PRIOR PILING DATE: 2001-01-66
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                                                                                                                         Score 15; DB 7; Length 136;
Pred. No. 1e+03;
0; Mismatches 0; Indels
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, OTHER INFORMATION: Clone ID: MRT4577_172037C.1
US-10-425-115-78961
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SOFTWARE: FaetSEQ for Windows Version 4.0
SEQ ID NO 817638
LENGTH: 478
                                                                                                                         Query Match 83.3%; Sc
Best Local Similarity 100.0%; P
Matches 15; Conservative 0;
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ORGANISM: Zea mays
; LENGTH: 136
; TYPE: DNA
; ORGANISM: Human
US-10-085-783A-27057
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RESULT 51
US-10-363-345A-14929/c
US-10-363-345A-14929, Application US/10363345A
; Sequence 14929, Application US/2040234960A1
; GENERAL INFORMATION:
; APPLICANT: Alexander Olek
; APPLICANT: Christian Piepenbrock
; APPLICANT: Christian Piepenbrock
; APPLICANT: Christian Piepenbrock
; TITLE OF INVENTION: Method for determining the degree of methylation of defined
; TITLE OF INVENTION: cyrosines in genomic DNA in the sequence context of 5'-CpG-3
; TILE REFERENCE: E01/1227
; CURRENT APPLICATION NUMBER: US/10/363,345A
; CURRENT PILING DATE: 2003-03-03
; NUMBER OF SEQ ID NOS: 40712
; SEQ ID NO 14929
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Sequence 817639, Application US/09925065A

Publication No. U320050228172A9

GREERAL INFORMATION: David G.

TITLE OF INVENTION: 1dentification and Mapping of Single

TITLE OF INVENTION: 1dentification and Mapping of Single

TITLE OF INVENTION: NUCLEOTIDE DAVINGED TO STATE OF THE REPERENCE: 108827.135

CURRENT APPLICATION NUMBER: US 60/243,096

FRIOR APPLICATION NUMBER: US 60/243,096

FRIOR FILING DATE: 2000-10-24

RRIOR APPLICATION NUMBER: US 60/252,147

FRIOR FILING DATE: 2000-11-20

FRIOR FILING DATE: 2000-11-30

FRIOR FILING DATE: 2000-11-30

FRIOR FILING DATE: 2000-11-30

FRIOR FILING DATE: 2000-10-16

FRIOR FILING DATE: 2001-01-16

FRIOR APPLICATION NUMBER: US 60/289,846

FROM FILING DATE: 2001-05-09

NUMBER OF SEC ID NOS: 957086

SOFTWARE: FRASEQ FOR WINGOWS VERSION 4.0

SEQ ID NO 817639
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OTHER INFORMATION: CpG-island No: 14929
US-10-363-345A-14929
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                     Length 478;
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100.0%; Pred. No. 1.2e+03;
.ive 0; Mismatches 0; Indels
                  Score 15; DB 4; Le
Pred. No. 1.2e+03;
0; Mismatches 0;
83.3%; Scor.
100.0%; Pre
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ORGANISM: Artificial Sequence
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13 CACCTATTCATACTC 27
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Best Local Similarity 100.1
Matches 15; Conservative
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Matches 16; Conservative
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US-10-425-115-104465
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                                                                                                                                                                                        Sequence 14930, Application US/10363345A
Publication No. US20040234960A1
GENERAL INFORMATION:
APPLICANT: Alexander Olek
APPLICANT: Kurt Berlin
TITLE OF INVENTION: Cytosines in genomic DNA in the sequence context of 5'-CpG-3;
TITLE OF INVENTION: Cytosines in genomic DNA in the sequence context of 5'-CpG-3;
CURRENT APPLICATION NUMBER: US/10/363,345A
CURRENT FILING DATE: 2003-03
SEQ ID NOS: 40712
LENGTH: 544
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US-10-363-483A-14929/C
US-10-363-483A-14929/C
; Sequence 14929/S Application US/10363483A
; Publication No. US20050064401A1
; GENERAL INFORMATION:
; APPLICANT: Alexander Olek
; APPLICANT: Christian Piepenbrock
; APPLICANT: Kurt Berlin
; TITLE OF INVENTION: 11nesses
; TITLE OF INVENTION: 11nesses
; FILE REFERENCE: 82011
; CURRENT APPLICATION NUMBER: US/10/363,483A
; NUMBER OF SEQ ID NOS: 40712
; SEQ ID NO 14929
; LENGTH: 544
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                     Gaps
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US-10-363-345A-14930
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; OTHER INFORMATION: chemically treated genomic DNA (Homo sapiens); OTHER INFORMATION: CpG-island No: 14929
US-10-363-483A-14929
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100.0%; Pred. No. 1.2e+03;
tive 0; Mismatches 0; Indels
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                     Indels
Pred. No. 1.2e+03;
; Mismatches 0;
Best Local Similarity 100.0%; P
Matches 15; Conservative 0;
                                                                                    532 CACCTATTCATACTC 518
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                                                            4 CACCTATTCATACTC 18
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                  RESULT 52
US-10-363-345A-14930
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RESULT 54

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Sequence 127043, Application US/10424599
| Sequence 127043, Application US/10424599|
| Publication No. USCO040031072A1
| GENERAL INFORMATION:
| APPLICANT: La Rosa Thomas J
| APPLICANT: Zhou Yihua
| APPLICANT: Zhou Yihua
| APPLICANT: Cao Yongwei
| TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
| TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
| TITLE OF INVENTION: NUMBER: US/10/424,599|
| CURRENT APPLICATION NUMBER: US/10/424,599|
| CURRENT FILING DATE: 2003-04-28|
| SEQ ID NO 127043
| LENGTH: 203
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Sequence 14930, Application US/10363483A

Fublication No. US2050064401A1

GENERAL INFORMATION:
APPLICANT: Alexander Olek
APPLICANT: Christian Piepenbrock
APPLICANT: Kurt Berlin
TITLE OF INVENTION: Diagnosis of illnesses or predisposition to certain
TITLE OF INVENTION: 11nesses
FILE REFERENCE: 82011
CURRENT APPLICATION NUMBER: US/10/362,483A
CURRENT APPLICATION OF SEQ ID NOS: 40712
SEQ ID NO 14930
LENGTH: 544
TYPE: DNA
ONGANISM: Artificial Sequence
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US-10-363-483A-14930
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.3%; Score 15; DB 9; Length 544, 100.0%; Pred. No. 1.2e+03; ive 0; Mismatches 0; Indels
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US-10-424-599-127043
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LOCATION: (1)..(203)
OTHER INFORMATION: unsure at all n locations
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Gaps
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                                                                                                                                                                                TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
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88.9%; Pred. No. 1.5e+03;
ive 0; Mismatches 2; Indels
                                                                                                                                                                                          TILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/25,147
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-6
PRIOR FILING DATE: 2000-11-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FASTSEQ FOR WINDOWS VERSION 4.0
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US-09-925-065A-614778
; Sequence 614778, Application US/09925065A
; Publication No. US20050228172A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133 CCACACCTATTCACACAC 150
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Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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CORGANISM: Homo sapiens
US-09-925-065A-614776
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CORGANISM: Homo sapiens
US-09-925-065A-614775
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US-09-925-065A-614776
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us-10-6,

LUCANT: Cabo, Yahua

APPLICANT: Cabo, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants

FILE REFERENCE: 38-21(53222)

CURRENT APPLICATION NUMBER: US/10/425,115

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 369326

SEQ ID NO 104465

LENGTH: 241

TYPE: ...
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Sequence 72836, Application US/10424599

Publication No. USCO040031072A1

SEQUENCE 72836, Application US/10424599

GENERAL INFORMATION:

APPLICANT: La Rosa Thomas J

APPLICANT: Zhou Yihua

APPLICANT: Cao Yongwai

TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With

TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(53223) B

CURRENT FILING DATE: 2003-04-28

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 285684

SEQ ID NO 72836
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Publication No. US20050228172A9
GENERAL INFORMATION
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82.2%; Score 14.8; DB 8; 88.9%; Pred. No. 1.4e+03;
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88.9%; Pred. No. 1.4e+03;
live 0; Mismatches 2;
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OTHER INFORMATION: unsure at all n locations
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OTHER INFORMATION: unsure at all n locations
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Matches 16; Conservative
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Matches 16; Conservative
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US-09-925-065A-614775
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LOCATION: (1)..(2
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APPLICANT: Wang, David G.
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Indentification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-00-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR PELING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-11-30
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-1
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CORGANISM: Homo sapiens
US-09-925-065A-614778
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Scoring table:

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Sequence 237819,
Sequence 851227,
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Sequence 75240, P
Sequence 614775,
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Sequence 1074562,
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Sequence 817638,
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Sequence 708422,
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Sequence 852313,
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Sequence 80878,
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Sequence 7
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Sequence 932779,
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Sequence 114677,
Sequence 134677,
Sequence 134677,
Sequence 134576,
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Sequence 1449975,
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                       GenCore version 5.1.8 (c) 1993 - 2006 Biocceleration Ltd.
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US-10-301-480-13015
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SUMMARIES

Length

Query Match

Result No.

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Published Applications NA New:*

Database

Post-processing: Minimum Match 00% Maximum Match 100% Listing first 150 summaries

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

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sequence 935054, Application US/09925065A; Sequence 935054, Application No. US20040181048A1; Sequence 935054, Application No. US20040181048A1; GENERAL INFORMATION:

APPLICANT: Wang David G.

TITLE OF INVENTION: Identification and Mapping of Single; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome; TITLE OF INVENTION: US 00/9925,065A; US/09/925,065A; US/09/925,065A; US/09/925,065A; US/09/925,065A; US/09/925,065A; US/09/925,065A; US/09/925,065A; US/09/926; PRIOR FILING DATE: 2000-10-24; PRIOR APPLICATION NUMBER: US 60/252,147; PRIOR APPLICATION NUMBER: US 60/250,092; PRIOR APPLICATION NUMBER: US 60/250,092; PRIOR PILING DATE: 2000-11-16; PRIOR APPLICATION NUMBER: US 60/269,846; PRIOR FILING DATE: 2001-01-16; PRIOR FILING DATE: 2001-01-016; PRIOR FILING DATE: 2001-01-16; PRIOR FILING DATE: 2001-01-016; PRIOR FILING DATE: 2001-0
APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR PAPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR PRING DATE: 2000-11-30
PRIOR PRING DATE: 2001-11-6
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PRILING DATE: 2001-01-16
PRIOR SEQ ID NOS: 957066
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 933053
LENGTH: 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 91.1%; Score 16.4; E
Best Local Similarity 94.4%; Pred. No. 42;
Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
CORGANISM: Homo sapiens
US-09-925-065A-935053
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US-09-925-065A-935054
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                                                                                          Sequence 64745, A Sequence 64745, A Sequence 779391, Sequence 779391, Sequence 59144, A Sequence 59144, A Sequence 59144, A Sequence 773791, Sequence 67815, Sequence 678156, Sequence 678156, Sequence 678156, Sequence 678156, Sequence 678157, A Sequence 678157, Sequence 678157, Sequence 678157, Sequence 678157, Sequence 678157, Sequence 13166, Appl Sequence 141, Appl Sequence 1316, Appl Sequence 1316, Appl Sequence 649038, Sequence 259014, Sequence 259014, Sequence 316303, Seque
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Sequence 1045405,
Sequence 500419,
Sequence 1113828,
Sequence 31583,
Sequence 95092,
Sequence 19086, A
Sequence 19086, A
Sequence 612495,
Sequence 612495,
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Sequence 632493,
Sequence 360917,
                                                                                      7 US-09-925-055A-64745
7 US-09-925-055A-64745
112 US-10-301-480-779392
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114 US-10-301-480-779392
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Gaps

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320 ccacaccrarrcaracac 337

1 CCACACCTATTCATACTC 18

DB 7; Length 586;

ALIGNMENTS

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Gaps
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   DB 7; Length 586;
                              Indels
 91.1%; Score 16.4; C 94.4%; Pred. No. 42; ive 0; Mismatches
                                                                            320 CCACACCTATTCATACAC 337
                                                           1 CCACACCTATTCATACTC 18
Query Match 91.1%;
Best Local Similarity 94.4%;
Matches 17; Conservative
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US-09-925-065A-952779 RESULT 3

RESULT 1 US-09-925-065A-935053 ; Sequence 935053, Application US/09925065A ; Publication No. US20040181048A1 ; GENERAL INFORMATION:

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TYPE: DNA ORGANISM: Homo sapiens
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CORGANISM: Homo sapien
US-11-121-849-134677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-11-121-849-134677
                                              RESULT 5
US-11-121-086-81
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                                                                                            GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR PELING DATE: 2000-10-24
PRIOR PILING DATE: 2000-11-20
PRIOR PAPLICATION NUMBER: US 60/250,092
PRIOR PAPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR PELING DATE: 2001-01-16
PRIOR PELING DATE: 2001-01-16
PRIOR PELING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
NUMBER OF SEQ ID NOS: 95708
TEMPORA APPLICATION NUMBER: US 60/289,846
TEMPORA SEQ ID NOS: 95709
TEMPORA PARTER FRANCE: F
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Bublication No. US20040181048A1

GERREAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome

FILE REPERBNCE: 108827, 135

CURRENT FILING DATE: 2001-08-08

PRIOR PILING DATE: 2000-10-24

PRIOR PILING DATE: 2000-11-20

PRIOR FILING DATE: 2000-11-20

PRIOR PILING DATE: 2000-11-20

PRIOR PILING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-6

PRIOR PILING DATE: 2000-11-6

PRIOR PILING DATE: 2001-01-6

PRIOR FILING DATE: 2001-01-6

PRIOR PILING DATE: 2001-01-16

PRIOR PILING DATE: 2001-01-16

PRIOR PILING DATE: 2001-01-16

PRIOR PILING DATE: 2001-01-16
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Pred. No. 42;
0; Mismatches
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Pred. No. 45
Sequence 952779, Application US/09925065A Publication No. US20040181048A1 GENERAL INFORMATION:
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94.4%;
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Best Local Similarity 94.4%;
Matches 17; Conservative
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US-09-925-065A-952779
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US-09-925-065A-919397
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Best Local Similarity
Matches 17; Conserv
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US-09-925-065A-919397/c
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SEQ ID NO 919397
LENGTH: 770
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APPLICANT: John Palma
TITLE OF INVENTION: Methods of Genetic Analysis of Formalin Fixed Paraffin Embedded St
TITLE OF INVENTION: Microarrays
FITLE OF INVENTION: Microarrays
FILE REFERENCE: 3684.1
CURRENT APPLICATION NUMBER: US/11/121,849
FILE REPERIOR DATE: 2005-05-03
PRIOR FILING DATE: 2004-05-03
NUMBER OF SEQ ID NOS: 673904
SOFTWARE Microarray Probe Sequence Listing Generator V 1.1
SEQ ID NO 134677
LENGTH: 25
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US-10-301-480-517106/c
Sequence 517106, Application US/10301480
Publication No. US20060057564A1
GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: in the Human Genome
FILE REFRENCE: 108827.137
FILE REFRENCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 10/215,598
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                                     GENERAL INFORMATION:
APPLICANT: POULSEN, TIM S.
APPLICANT: NUCLEIC ACID ENOBES AND NUCLEIC ACID ANALOG PROBES FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-04
PRIOR APPLICATION NUMBER: 60/567,570
PRIOR APPLICATION NUMBER: 60/567,570
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
SEQ ID NO 81
LENGTH: 156544
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91.1%; Score 16.4; DB 17; Length 156544; 94.4%; Pred. No. 1.3e+02;
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Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 16;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Sequence 134677, Application US/11121849; Publication No. US20050272080A1; GENERAL INFORMATION:
; Sequence 81, Application US/11121086
; Publication No. US20050266459A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88.9%; Scc.
100.0%; Pre
0; '
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Matches 17; Conservative
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Best Local Similarity 100.
Matches 16; Conservative
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Subjunction 104975, Application US/10301480

Subjunction 104975, Application US/10301480

Subjunction No. US20060057564A1

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms

TITLE OF INVENTION: in the Human Genome

FILE OF INVENTION: in the Human Genome

FILE OF INVENTION: 10480

CURRENT FILING DATE: 2002-11-21

PRIOR APPLICATION NUMBER: US 10/215,598

PRIOR APPLICATION NUMBER: US 60/311,695

PRIOR FILING DATE: 2001-08-10

NUMBER OF SEQ ID NOS: 1226618

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1049975

LENGTH: 589
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US-10-301-480-436566

j Sequence 436566

general and wappication US/10301480

general INFORMATION:
TITLE OF INVENTION: in the Human Genome
FILE REFERENCE: 10827.137

CURRENT APPLICATION NUMBER: US/10/301,480

CURRENT FILING DATE: 2002-11-21

PRIOR APPLICATION NUMBER: US 60/311,695

PRIOR FILING DATE: 2001-08-10

NUMBER OF SEQ ID NOS: 1226618

SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 589
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Pred. No. 1.6e+02;
0; Mismatches 1; Indels
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   NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 459786
LENGTH: 567
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94.1%;
                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                           TYPE: DNA
CORGANISM: Homo sapiens
US-09-925-065A-459786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
CORGANISM: Homo sapien
US-10-301-480-436566
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US-10-301-480-1049975
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| Sequence 1130515, Application US/10301480 |
| Publication No. US20660657564A1 |
| Sequence 1130515, Application US/10301480 |
| Publication No. US20660657564A1 |
| GENERAL INFORMATION: In the Human Genome |
| TITLE OF INVENTION: in the Human Genome |
| FILE REFERENCE: 108827.137 |
| CURRENT APPLICATION NUMBER: US/10/301,480 |
| FILE REFERENCE: 108027.137 |
| PRIOR FILING DATE: 2002-11-21 |
| PRIOR APPLICATION NUMBER: US 60/311,695 |
| PRIOR FILING DATE: 2001-08-10 |
| PRIOR FILING DATE: 2001-08-10 |
| PRIOR FILING DATE: 2001-08-10 |
| WUMBER OF SEQ ID NOS: 1226818 |
| COFTWARE FEALESQ for Windows Version 4.0 |
| CONTACTION NUMBER: PEALESQ FOR Windows Version 4.0 |
| CONTACTION NUMBER: PEALESQ FOR WINDOWS PERSON |
| CONTACTION NUMBER 
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US-09-925-065A-459786/C
; Sequence 459786, Application US/09925065A
; Publication No. US20040181048A1
; GENERAL INFORMATION:
; APPLICANT: Wangy, David G.
; TITLE OF INVENTION: Identification and Mapping of Single
; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
; TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
; TITLE OF INVENTION: NUMBER: US/09/925,065A
; CURRENT FILING DATE: 2000-10-30
; PRIOR APPLICATION NUMBER: US 60/252,147
; PRIOR FILING DATE: 2000-11-20
; PRIOR PILING DATE: 2000-11-30
; PRIOR PILING DATE: 2000-11-30
; PRIOR PILING DATE: 2000-11-30
; PRIOR PILING DATE: 2001-11-30
; PRIOR PILING DATE: 2001-01-16
; PRIOR FILING DATE: 2001-01-16
; PRIOR FILING DATE: US 60/289,846
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                                                                                                                                                                                                                                                                                                                                                                                    85.6%; Score 15.4; DB 12; Length 566; 94.1%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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PRIOR FILING DATE: 2002-08-09
PRIOR APPLICATION NUMBER: US 60/311,695
PRIOR FILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FASTESEQ for Windows Version 4.0
SEQ ID NO 517106
LENGTH: 566
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Best Local Similarity 94.1
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Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapien
US-10-301-480-517106
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; ORGANISM: Homo sapien
US-10-301-480-1130515
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LENGTH: 566
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CENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
FILE REFERENCE: 108827.137
CURRENT APPLICATION NUMBER: US 10/215,598
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: RestSEQ for Windows Version 4.0
SEQ ID NO 1169488
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APPLICANT: BOLAM
APPLICANT: BOLAM
APPLICANT: BOLAM
APPLICANT: BATES, Stephen
APPLICANT: BATES, Stephen
APPLICANT: FANTIN, Dennis
TITLE OF INVENTION: COMPOSITIONS FOR INFERRING BOVINE TRAITS
FILE REPERBENCE: MAIL100-2
CURRENT APPLICATION NUMBER: US/10/750,185
CURRENT FILING DATE: 2003-12-31
PRIOR FILING DATE: 2002-12-31
NUMBER OF SEQ ID NOS: 64922
SOFTWARE: PatentIN version 3.1
SOFTWARE: PatentIN version 3.1
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94.1%; Pred. No. 1.8e+02;
iive 0; Mismatches 1;
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                                                                                                                                                                           Sequence 1169488, Application US/10301480 Publication No. US20060057564A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-750-185-59851
; Sequence 59851, Application US/10750185
; Publication No. US20050260603A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Bovine 19866881032028
US-10-750-185-59851
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                                               977 cacaccrerrcaracre 961
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  2 CACACCTATTCATACTC 18
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APPLICANT: MAI GENOMICS, INC.
APPLICANT: DENISE, Sue K.
APPLICANT: RERR, Richard
APPLICANT: ROSENFELD, David
APPLICANT: HOLM, Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 94.1<sup>1</sup>
Matches 16; Conservative
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                                                                                                                              RESULT 14
US-10-301-480-1169488/c
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APPLICANT: Wang, David G.

TITLE OF INVENTION: in the Human Genome
FILE OF INVENTION: in the Human Genome
FILE STREET OF INVENTION: in the Human Genome
FILE REFERENCE: 108827.137

CURRENT APPLICATION NUMBER: US/10/301,480

CURRENT FILING DATE: 2002-11-21

PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2003-08-10

NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 990
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                               Gaps
                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REPERBENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT PILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/23,096
PRIOR FILING DATE: 2000-110-20
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
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94.1%; Pred. No. 1.6e+02;
tive 0; Mismatches 1; Indels
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Sequence 366085, Application US/09925065A

Publication No. US20040181048A1

GENERAL INFORMATION:
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US-10-301-480-556079/c
; Sequence 556079, Application US/10301480
; Publication No. US20060057564A1
; GENERAL INFORMATION:
                                                                                                            183 CCACACCTATCCATACT 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197 ccacacctarccaract 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CCACACCTATTCATACT 17
                                                                         1 CCACACCTATTCATACT 17
Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 94.1
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapiens
US-09-925-065A-366085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapien
US-10-301-480-556079
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LENGTH: 603
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Sequence 376219
Sequence 376219, Application US/11101244
Publication No. US20800246794A1
GENERAL INFORMATION:
APPLICANT: Khvorova, Anastasia
APPLICANT: Reynolds, Angela
APPLICANT: Reynolds, Angela
APPLICANT: Responds, Angela
APPLICANT: Beake, Devin
APPLICANT: Beake, Devin
APPLICANT: Boarshall, William
APPLICANT: 13499US
CURRENT APPLICATION NUMBER: 60/502,050
PRIOR PILING DATE: 2005-04-07
PRIOR FILING DATE: 2002-01-04
PRIOR FILING DATE: 2002-11-14
NUMBER: OF SEQ ID NOS: 1591911
SOFTWARE: Proprietary
SEQ ID NO 376219
                                                                                                                                                                          18639,
18648,
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                                                18615,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
85.6%; Score 15.4; DB 17;
94.1%; Pred. No. 3.6e+02;
tive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21744 CACACCCATTCATACTC 21760
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Best Local Similarity 94.1
Matches 16; Conservative
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ORGANISM: Homo sapiens
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US-11-101-244-376219
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US-11-124-367A-5020
; Sequence 5020, Application US/11124367A
; Sequence 5020, Application US/11124367A
; Sequence 5020, Application US/11124367A
; Publication No. US20060024700A1
; GENRRAL INFORMATION:
; APPLICANT: Michoele Cargill
; APPLICANT: Hongjin Huang
; TITLE OF INVENTION: Genetic Polymorphisms Associated with
; TITLE OF INVENTION: GFIDENSI Methods of Detection and Uses Thereof
; FILE REFERENCE: CLO01519.CND
; CURRENT APPLICATION NUMBER: US/11/124,367A
; CURRENT FILING DATE: 2004-05-07
; PRIOR FILING DATE: 2004-06-07
; PRIOR FILING DATE: 2004-06-07
; PRIOR FILING DATE: 2004-06-25
; PRIOR FILING DATE: 2004-06-09
; NUMBER OF SEQ ID NOS: 34460
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ IDN 50200
           Sequence 59851, Application US/10750623

Publication No. US20050287331A1

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: MI GENOMICS, INC.
APPLICANT: RERR, Richard
APPLICANT: ROSENFELD, David
APPLICANT: FARR, Richard
APPLICANT: FARR, Richard
APPLICANT: FARR, Richard
APPLICANT: FARR, Stephen
APPLICANT: FARTIN, Dennis
TILLE OF INVENTION: METHODS AND SYSTEMS FOR INFERRING BOVINE TRAITS
FILE REFERENCE: MMI1100-1
CURRENT APPLICATION NUMBER: US/10/750,623
CURRENT APPLICATION NUMBER: US 60/437,482
PRIOR FILING DATE: 2002-12-31
NUMBER OF SEQ ID NOS: 64922
SOFTWARE: PALENTIN VERSION 3.1
SEQ ID NO 59851
LENGTH: 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
LOCATION: 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388,
LOCATION: 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398,
LOCATION: 2389, 1852, 1852, 18534, 18555, 18556, 18557, 18558,
LOCATION: 18559, 18560, 18561, 18562, 18563, 18564, 18565, 18565
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match

85.6%; Score 15.4; DB 10; Length 1201;
Best Local Similarity 94.1%; Pred. No. 1.8e+02;
Matches 16; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18571,
18580,
18588,
18596,
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NAME/KEY: misc_feature
LOCATION: 1856, 18569, 18570, 18:
LOCATION: 18576, 18586, 18578, 18579, 18:
LOCATION: 18584, 18585, 18586, 18577, 18:
LOCATION: 18592, 18593, 18594, 18595, 18:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Bovine 19866881032028
US-10-750-623-59851
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ORGANISM: Homo sapiens
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18649,
                                                                                                                 18673, 18674,
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                                                                                                               18672, 18673,
18681, 18682,
18689, 18690,
18697, 18698
18623, 18624,
18631, 18632
                                                                  18656, 18657,
18664, 18665
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0
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258 CCACACCTATTCATA 244
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; ORGANISM: Homo sapiens
US-10-995-561-74454
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US-09-925-065A-817639
                                                                                                                                                                                   GENERAL INFORMATION:
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TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR PILING DATE: 2000-11-20
PRIOR PILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-11-30
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2010-01-6
PRIOR FILING DATE: 2010-01-6
PRIOR FILING DATE: 2010-01-6
PRIOR FILING DATE: 2010-01-6
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                                                                                                                                                                                                  APPLICANT: Leake, Devin
APPLICANT: Leake, Devin
APPLICANT: Marchall, William
APPLICANT: Scaringe, Stephen
APPLICANT: Scaringe, Stephen
TITLE OF INVENTION: PUNCTIONAL
FILE REFERENCE: 13499US
CURRENT APPLICATION NUMBER: US/11/083,784
CURRENT APPLICATION NUMBER: US/11/083,784
CURRENT APPLICATION NUMBER: US/10/714,333
PRIOR APPLICATION NUMBER: 60/502,050
PRIOR PILING DATE: 2003-11-14
PRIOR FILING DATE: 2003-11-14
PRIOR FILING DATE: 2003-11-14
NUMBER OF SEQ ID NOS: 1591911
SGPTWARE: Proprietary
LUMCTH: 19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83.3%; Score 15; DB 16;
ilarity 73.3%; Pred. No. 1.3e+02;
Conservative 4; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 817638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 376219, Application US/11083784 Publication No. US20050245475A1
                                                                                                                                     APPLICANT: Dharmacon, Inc.
APPLICANT: Khvorova, Anastasia
APPLICANT: Reynolds, Angela
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-11-083-784-376219

// ORGANISM: Homo sapiens
US-09-925-065A-817638
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Best Local Similarity
Lea 11; Conserv?
                                              -11-083-784-376219
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Gaps

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1 CCACACCTATTCATA 15

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TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REPERENCE: CL001559
CURRENT APPLICATION WINBER: US/10/995, 561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FASISEQ for Windows Version 4.0
SEQ ID NO 74554
LENGTH: 201
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                                                                                              JOHNSTON THE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2000-10-24
PRIOR PELING DATE: 2000-10-24
PRIOR PPLICATION NUMBER: US 60/252,147
PRIOR PILING DATE: 2000-11-20
PRIOR PPLING DATE: 2000-11-30
PRIOR PPLING DATE: 2000-11-6
PRIOR FILING DATE: 2001-01-16
PRIOR PLING DATE: 2001-01-16
PRIOR FILING DATE: 2001-05-09
PRIOR FILING DATE: 2001-05-09
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FASTSEQ for Windows Version 4.0
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Pred. No. 2.8e+02;
0; Mismatches 2; Indels 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 478;
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100.0%; Pred. No. 2.6e+02;
iive 0; Mismatches 0;
US-09-925-065A-817639/c
; Sequence 817639, Application US/09925065A
; Publication No. US20040181048A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 74454, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CCACACCTATTCATACTC 18
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88.9%;
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Best Local Similarity 88.9'
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Best Local Similarity 100.
Matches 15; Conservative
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US-10-995-561-75240
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GENERAL INFORMATION:

JOHNSTAN WANG, David G.

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US 60/243,096
PRIOR FILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-20
PRIOR PELING DATE: 2000-11-30
PRIOR PILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/260,092
PRIOR APPLICATION NUMBER: US 60/260,092
PRIOR APPLICATION NUMBER: US 60/260,092
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 82.2%; Score 14.8; DB 7; Length 392; Best Local Similarity 88.9%; Pred. No. 3.2e+02; Matches 16; Conservative 0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82.2%; Score 14.8; DB 7; Length 392; 88.9%; Pred. No. 3.2e+02; ive 0; Mismatches 2; Indels (
                                                  CUKKENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR FILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 644776
                                          CURRENT APPLICATION NUMBER: US/09/925,065A CURRENT FILING DATE: 2001-08-08
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US-10-301-480-461153
; Sequence 461153, Application US/10301480
; Publication No. US20660057564A1
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo sapiens
US-09-925-065A-614776
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US-09-925-065A-614778
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Matches 16; Conserv
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Sequence 75240, Application US/10995561
Publication No. US20050272054A1
GENERAL INFORMATION:
THE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REFERENCE: CL001559
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT PILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 75240
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Sequence 614775, Application US/09925065A

PUBLICALION NO. USZO040181048A1

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: NUCLECTION POLYMORPHISMS in the Human Genome
TITLE OF INVENTION: NUCLECTION OF SINGLE

CURRENT APPLICATION NUMBER: US/09/925,065A

CURRENT FILING DATE: 2001-08-08

PRIOR FILING DATE: 2000-10-24

PRIOR PLICATION NUMBER: US 60/222,147

PRIOR PLICATION NUMBER: US 60/252,147

PRIOR PLICATION NUMBER: US 60/252,147

PRIOR FILING DATE: 2000-11-20

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16

PRIOR PLILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16
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Sequence 614776, Application US/09925065A

Publication No. US20040181048A1

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
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Pred. No. 3.2e+02;
0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                156 CCACACCTATCCATACAC 173
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Best Local Similarity 88.9
Matches 16; Conservative
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US-10-995-561-75240
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US-09-925-065A-614775
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nes 16; Conserv
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LENGTH: 392
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Matches
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82.2%; Score 14.8; DB 12;
88.9%; Pred. No. 3.3e+02;
ive 0; Mismatches 2;
                            PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FILING DATE: 2000-11-30
PRIOR PLING DATE: 2000-11-30
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastSEQ for Windows Version 4.0
SCOTUD NO 393035
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SOFTWARE: FastSEQ for Windows Version 4.0
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           FILING DATE: 2000-11-20
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Best Local Similarity 88.9
Matches 16; Conservative
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US-09-925-065A-393035
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US-10-301-480-326616
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Best Local Similarity
Matches 16; Conserv
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APPLICANT: Wang, David G.

TITLE OF INVENTION: In the Human Genome
FILE OF INVENTION: In the Human Genome
FILE OF INVENTION: In the Human Genome
FILE REFERENCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT APPLICATION NUMBER: US 10/215,598
PRIOR APPLICATION NUMBER: US 60/311,695
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
PRIOR FILING DATE: 2001-08-10
SEQ ID NOS: 1226818
SOFTWARE: FastSEQ for Windows Version 4.0
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TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: in the Human Genome
FILE REFERENCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 10/215,598
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FLASTSEQ for Windows Version 4.0
LENGTH: 470
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Publication No. US20040181048A1
GENERAL INPORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT TLING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
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88.9%; Pred. No. 3.3e+02;
live 0; Mismatches 2; Indels 0.
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Pred. No. 3.3e+02;
0; Mismatches 2;
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Best Local Similarity 88.9
Matches 16; Conservative
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; ORGANISM: Homo sapien
US-10-301-480-461153
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US-10-301-480-1074562
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Best Local Similarity
Matches 16; Conserv
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APPLICANT: Wang, David G.

TITLE OF INVENTION: In the Human Genome
FILE SETEMBRICS: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT APPLICATION NUMBER: US/10/301,480
FRICH REPRINCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/215,598
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FastsEQ for Windows Version 4.0
LENGTH: 484
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Publication No. US20060057564A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: in the Human Genome
TITLE OF INVENTION NUMBER: US/10/301,480
CURRENT FILING DATE: 2002-08-09
PRIOR PILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
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82.2%; Score 14.8; DB 7; Length 477; 88.9%; Pred. No. 3.3e+02; ive 0; Mismatches 2; Indels
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Query Match
Best Local Similarity
Matches 16; Conserv
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US-11-128-061-5222
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APPLICANT:
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APPLICANT: Melville, Mark W.
APPLICANT: Charlebois, Timothy S.
APPLICANT: Charlebois, Timothy S.
APPLICANT: Charlebois, Timothy S.
APPLICANT: Charlebois, Timothy S.
APPLICANT: Hann, Louane E.
APPLICANT: Binacore, Martin S.
APPLICANT: Leonard, Mark W.
APPLICANT: Brown, Eugene L.
APPLICANT: Miller, Christopher P.
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES RELATED TO OLIGONUCLEOTIDE ARRAYS
TITLE OF INVENTION: TO MONITOR GENE EXPRESSION
FILE REPERENCE: 01997.027701
CURRENT APPLICATION NUMBER: US/11/128,061
CURRENT APPLICATION NUMBER: US/6750,425
PRIOR APPLICATION NUMBER: US 60/570,425
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Publication No. US2040181048A1

GENERAL INFORMATION:
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nuclectide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135

CURRENT APPLICATION NUMBER: US/09/925,065A

CURRENT APPLICATION NUMBER: US 60/243,096

PRIOR FILING DATE: 2000-10-24

PRIOR PELLING DATE: 2000-11-30

PRIOR PILING DATE: 2000-11-30

PRIOR APPLICATION NUMBER: US 60/25,147

PRIOR APPLICATION NUMBER: US 60/25,766

PRIOR APPLICATION NUMBER: US 60/261,766

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-05-09

NUMBER OF SEQ ID NOS: 957086

SOFTWARE: PastSEQ for Windows Version 4.0

FRANCELLA ACCOUNTY A
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                                                                                                                                                                                                               Length 484;
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Pred. No. 3.38+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                        Query Match 82.2%; Score 14.8; DB 12; Best Local Similarity 88.9%; Pred. No. 3.3e+02; Matches 16; Conservative 0; Mismatches 2;
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Best Local Similarity 88.5.
Loca 16; Conservative
; SEQ ID NO 940025
; LENGTH: 484
; TYPE: DNA
; ORGANISM: Homo sapien
US-10-301-480-940025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens
US-09-925-065A-246390
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US-11-128-061-1580
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APPLICANT: Sinacore, Martin S.
APPLICANT: Leonard, Mark W.
APPLICANT: Brown, Eugene L.
APPLICANT: Miller, Christopher P.
TITLE OF INVENTION: OLIGONUCLEOTIDE ARRAYS TO MONITOR GENE EXPRESSION AND METHODS FOR TITLE OF INVENTION: MAKING AND USING SAME
FILE REFERENCE: 01997.027700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Melville, Mark W.
APPLICANT: Charlebois, Timothy S.
APPLICANT: Melville, Milliam M.
APPLICANT: Hann, Louane E.
APPLICANT: Hann, Louane E.
APPLICANT: Brown, Eugene E.
APPLICANT: Brown, Eugene L.
APPLICANT: Brown, Eugene L.
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES RELATED TO OLIGONUCLEOTIDE ARRAYS
TITLE OF INVENTION: TO MONITOR GENE EXPRESSION
FILE REFERENCE: 01997, 027701
CURRENT FILLING DATE: 2005-05-11
CURRENT FILLING DATE: 2005-05-11
FILE REFERENCE: 2015-05-11
NUMBER OF SED ID NOS: 7285
SOFTWARE: PatentIn version 3.3
SED ID NO 5222
LENGTH: 503
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Pred. No. 3.4e+02;
0; Mismatches 2;
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CURRENT FILING DATE: 2005-05-11
PRIOR APPLICATION NUMBER: US 60/570,425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 1580, Application US/11128049; Publication No. US20060010513A1
                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 5222, Application US/11128061; Publication No. US20060003958A1; GENERAL INFORMATION:
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NUMBER OF SEQ ID NOS: 7285
SOFTWARE: Patentin version 3.3
SEQ ID NO 1580
LENGTH: 503
                                                                                                                                                                        ch 82.2%;
il Similarity 88.9%;
16; Conservative
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US-11-128-061-5222
                                                                                       ; TYPE: DNA
; ORGANISM: Cricetulus griseus
US-11-128-061-1580
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Matches 16; Conserve
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ATTLE OF INVENTION:
TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: In the Human Genome
TITLE OF INVENTION: in the Human Genome
FILE REPERENCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT APPLICATION NUMBER: US 10/215,598
PRIOR PILING DATE: 2002-08-09
PRIOR APPLICATION NUMBER: US 60/311,695
PRIOR PILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 98360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wanning, David G.
TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: in the Human Genome
FILE REPERENCE: 10827.13
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/311,695
PRIOR PILING DATE: 2001-08-09
PRIOR PILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 370252
LENGTH: 533
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                                                                                                                                                                  Query Match 82.2%; Score 14.8; DB 12; Length 533; Best Local Similarity 88.9%; Pred. No. 3.4e+02; Matches 16; Conservative 0; Mismatches 2; Indels 0;
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88.9%; Pred. No. 3.4e+02;
iive 0; Mismatches 2;
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                                                                                                                                                                                                                                                                                                                                                             409 CCACACCTATTCACACAC 426
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; LENGTH: 533
; TYPE: DNA
; ORGANISM: Homo sapien
US-10-301-480-370251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapien
US-10-301-480-370252
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nes 16; Conserv
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US-10-301-480-370252
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JOS-11-128-049-522

JOS-11-128-049-521

JOS-11-128-049-52-11

JOS-11-128-049-65-11

JOS-11-128-049-65-11

JOS-11-128-049-65-11

JOS-11-128-048-65-11

JOS-11-128-048
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; Sequence 370251, Application US/10301480
; Publication No. US20060057564A1
; GENERAL INFORMATION:
; AFPLICANT: Wang, David G.
; TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
; TITLE OF INVENTION: in the Human Genome
; TITLE OF INVENTION: in the Human Genome
; TURENT APPLICATION NUMBER: US/10/301,480
; CURRENT APPLICATION NUMBER: US 10/215,598
; PRIOR APPLICATION NUMBER: US 60/311,695
; PRIOR FILING DATE: 2002-08-09
; PRIOR FILING DATE: 2001-08-10
; NUMBER OF SEQ ID NOS: 1226818
; SOFFWARE: PastSEQ for Windows Version 4.0
; SEQ ID NO 370251
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                               NUMBER OF SEQ ID NOS: 7285
SOFTWARE: Patentin version 3.3
SEQ ID NO 1580
LENGTH: 503
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Best Local Similarity 88.9%;
Matches 16; Conservative
                                                                                                                                                                         ; TYPE: DNA
; ORGANISM: Cricetulus griseus
US-11-128-049-1580
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   PRIOR FILING DATE: 2004-05-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-11-128-049-5222
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US-09-925-065A-523202/c
; Sequence 523202, Application US/09925065A
; Publication No. US20040181048A1
; GENERAL INFORMATION:
                                                     Sequence 293391, Application US/09925065A Publication No. US20040181048A1 GENERAL INFORMATION:
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88.9%;
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Best Local Similarity 88.9%;
Matches 16; Conservative (
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Best Local Similarity 88.9
Matches 16; Conservative
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US-09-925-065A-523202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-925-065A-293391
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APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide Polymorphisms
FILE OF INVENTION: in the Human Genome
FILE PEPERENCE: 108827.137

CURRENT APPLICATION NUMBER: US/10/301,480

CURRENT FILING DATE: 2002-11-21

PRIOR FILING DATE: 2002-08-09

PRIOR FILING DATE: 2002-08-09

PRIOR FILING DATE: 2001-08-10

NUMBER OF SEQ ID NOS: 1226818

SEQ ID NO 98361

LENGTH: 533
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GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Mucleotide Polymorphisms in the Human Genome
FILE REFERRER. US/09/925,065A
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR FILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 20001-11-30
PRIOR FILING DATE: 20001-11-30
PRIOR FILING DATE: 20001-11-30
PRIOR FILING DATE: 20001-11-30
PRIOR FILING DATE: 20001-10-6
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastEEQ for Windows Version 4.0
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                                                                                                                                  ; Sequence 983661, Application US/10301480; Publication No. US20060057564A1; GENERAL INFORMATION:
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409 CCACACCTATTCACACAC 426
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CCACACCTATTCATACTC 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-925-065A-293390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , ORGANISM: Homo sapien
US-10-301-480-983661
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Matches 16; Conserv
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US-09-925-065A-293390
                                                                                       RESULT 40
US-10-301-480-983661
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TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/222,147
PRIOR PELING DATE: 2000-11-20
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR PELING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/250,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR PELING DATE: 2001-01-16
PRIOR PELING DATE: 2001-01-16
PRIOR PELING DATE: 2001-01-6
PRIOR PELING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastSEQ for Windows Version 4.0
TYPE: DNA
GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT:
Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135

CURRENT APPLICATION NUMBER: US/09/925,065A

CURRENT APPLICATION NUMBER: US 60/243,096

PRIOR FILING DATE: 2000-10-24

PRIOR FILING DATE: 2000-11-20

PRIOR PILING DATE: 2000-11-20

PRIOR PILING DATE: 2000-11-30

PRIOR APPLICATION NUMBER: US 60/250,092

PRIOR APPLICATION NUMBER: US 60/261,766

PRIOR PILING DATE: 2000-11-16

PRIOR PILING DATE: 2001-01-16

PRIOR PILING DATE: 2001-01-16

PRIOR FILING 
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Pred. No. 3.4e+02;
0; Mismatches 2;
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Pred. No. 3.4e+02;
0; Mismatches 2;
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Best Local Similarity

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General inventation;

General inventation;

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome

FILE REPERENCE: 108827.135

CURRENT APPLICATION NUMBER: US/09/925,065A

CURRENT PILING DATE: 2001-08-08

PRIOR APPLICATION NUMBER: US 60/252,147

PRIOR APPLICATION NUMBER: US 60/252,147

PRIOR FILING DATE: 2000-11-20

PRIOR APPLICATION NUMBER: US 60/252,147

PRIOR FILING DATE: 2001-11-20

PRIOR FILING DATE: 2001-01-16

SPRIOR FILING DATE: 2001-01-16

PRIOR PRIOR FILING DATE: 2001-01-16

PRIOR PR
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US-09-925-065A-143110/C
i Sequence 143110, Application US/09925065A
; Publication No. US20040181048A1
; GENERAL INFORMATION:
i APPLICANT: Warg, David G.
i TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
i TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
i TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
i TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
i TITLE OF INVENTION: NUCLEOTION NUMBER: US 60/243,096
i PRIOR APPLICATION NUMBER: US 60/252,147
; PRIOR APPLICATION NUMBER: US 60/252,147
; PRIOR APPLICATION NUMBER: US 60/250,092
; PRIOR PILING DATE: 2000-11-30
; PRIOR PILING DATE: 2001-11-30
; PRIOR PILING DATE: 2001-01-16
; PRIOR FILING DATE: 2001-01-16
; PRIOR FILING DATE: US 60/289,846
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Indels
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Pred. No. 3.4e+02;
0; Mismatches 2;
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 143110
LENCTH: 565
                                                                                                                                                                                                                                                                                              Sequence 523203, Application US/09925065A, Publication No. US20040181048A1, GENERAL INFORMATION:
                                                     492 CCACACCTGTTCACACTC 475
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1 CCACACCTATTCATACTC 18
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Best Local Similarity 88.9
Matches 16; Conservative
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US-09-925-065A-523203
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                                                                                                                                                                                                                  RESULT 44
US-09-925-065A-523203/c
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LENGTH: 538
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Sequence 59147, Application US/10301480

; Sequence 59147, Application US/10301480

; Dublication No. US206606576641

; GENERAL INPORMATION:
    APPLICANT: Wang, David G.

; TITLE OF INVENTION: In the Human Genome
    TITLE OF INVENTION: In the Human Genome
    TITLE OF INVENTION: In the Human Genome
    FILE REFERENCE: 108827.137
    CURRENT APPLICATION NUMBER: US 10/216,598
    PRIOR PAPLICATION NUMBER: US 60/311,695
    PRIOR PILING DATE: 2001-08-10
    PRIOR FILING DATE: 2001-08-10
    PRIOR FILING DATE: 2001-08-10
    NUMBER OF SEQ ID NOS: 1226818
    SOFTWARE: FastSEQ for Windows Version 4.0
    SEQ ID NO 59147

LENGTH: 566
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APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: UNCHOCKED BY THE COURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/250,147
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR PILING DATE: 2000-11-20
PRIOR PILING DATE: 2000-11-30
PRIOR PILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/260,992
PRIOR PILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/289,846
PRIOR PILING DATE: 2001-01-16
SROFTWARE: FastEQ for Windows Version 4.0
SEQ ID NO 141111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82.2%; Score 14.8; DB 7; Length 565; 88.9%; Pred. No. 3.4e+02; ive 0; Mismatches 2; Indels (
88.9%; Pred. No. 3.4e+02; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                ; Sequence 143111, Application US/09925065A ; Publication No. US20040181048A1
                                                                                                      125 CCACACCTATTCGTACAC 108
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                                                                         1 CCACACCTATTCATACTC
                       16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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US-09-925-065A-143111
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; ORGANISM: Homo sapien
US-10-301-480-59147
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hes 16; Conserv
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Matches
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Query Match
Best Local Similarity 88.9
Matches 16; Conservative
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Matches 16; Conservative
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US-09-925-065A-523204
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; ORGANISM: Homo sapien
US-10-301-480-237818
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                                                                                                                       RESULT 48

US-10-301-480-672556/c

; Sequence 672556, Application US/10301480
; Sequence 672556, Application US/10301480
; Publication No. US20060057564A1
; GENERAL INFORMATION:
; APPLICANT: Wang, David G.
; TILE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
; TILE OF INVENTION: in the Human Genome
; FILE REFRENCE: 10887.137
; CURRENT APPLICATION NUMBER: US/10/301,480
; CURRENT FILING DATE: 2002-11-21
; PRIOR PAPLICATION NUMBER: US 10/215,598
; PRIOR FILING DATE: 2002-08-09
; PRIOR FILING DATE: 2001-08-10
; NUMBER OF SEQ ID NOS: 1226618
; SOFTWARE PERSENCE FRENCE: 2001-08-10
; NUMBER OF SEQ ID NOS: 1226618
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US-09-925-065A-523201/c
is Sequence 523201, Application US/09925065A
is Publication No. US20040181048A1
is GENERAL INFORMATION:
is APPLICANT: Wangy, David G.
i TITLE OF INVENTION: Identification and Mapping of Single
i TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
if TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
if TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
if TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
if TITLE OF INVENTION: NUCLEOTIDE OF SINGLE SUCCESA
i CURRENT PILING DATE: 2000-10-24
is PRIOR APPLICATION NUMBER: US 60/252,147
is PRIOR APPLICATION NUMBER: US 60/252,147
is PRIOR APPLICATION NUMBER: US 60/250,092
is PRIOR APPLICATION NUMBER: US 60/250,092
is PRIOR APPLICATION NUMBER: US 60/261,766
is PRIOR APPLICATION NUMBER: US 60/261,766
is PRIOR APPLICATION NUMBER: US 60/269,846
is PRIOR APPLICATION NUMBER: US 60/269,846
is PRIOR APPLICATION NUMBER: US 60/269,846
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 523201
LENGTH: 568
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                              211 CCACACCTATTCACACAC 194
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Best Local Similarity 88.9%;
Matches 16; Conservative C
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Matches 16; Conservative
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US-09-925-065A-523201
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US-10-301-480-672556
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LENGTH: 566
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APPLICANT: Wang, David G.
TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
TITLE OF INVENTION: in the Human Genome
TITLE REPERENCE: 10827.11.2
FILE REPERENCE: 10827.11.21
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT FILING DATE: 2002-11-21
PRIOR FILING DATE: 2002-08-09
PRIOR PILING DATE: 2001-08-09
PRIOR PILING DATE: 2001-08-09
PRIOR FILING DATE: 2001-08-09
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Sequence 523204, Application US/09925065A

Sequence 523204, Application US/09925065A

Sublication No. US20040181048A1

SEMERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: Identification and Mapping of Single

TITLE OF INVENTION: NUMBER: US/09/925,065A

CURRENT APPLICATION NUMBER: US 60/243,096

PRIOR APPLICATION NUMBER: US 60/243,096

PRIOR PILING DATE: 2000-10-24

PRIOR PILING DATE: 2000-11-20

PRIOR APPLICATION NUMBER: US 60/250,092

PRIOR APPLICATION NUMBER: US 60/261,766

PRIOR APPLICATION NUMBER: US 60/261,766

PRIOR PILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16

PRIOR FILING DATE: 2001-01-16

PRIOR PILING DATE: 2001-01-
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Pred. No. 3.5e+02;
0; Mismatches 2;
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US-10-301-480-237818/c
'Sequence 237818, Application US/10301480
; Publication No. US20060057564A1
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88.9%;
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Gaps

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Indels

Length 570;

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Sequence 630983, Application US/09925065A
; Publication No. US20040181048A1
; GENERAL INFORMATION:
    APPLICANT: Wang, David G.
    TITLE OF INVENTION: Identification and Mapping of Single
    TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
    FILE REFERENCE: 108827.135
; CURRENT APPLICATION NUMBER: US/09/925,065A
; CURRENT FILING DATE: 2001-08-08
; PRIOR APPLICATION NUMBER: US 60/243,096
; PRIOR APPLICATION NUMBER: US 60/252,147
; PRIOR APPLICATION NUMBER: US 60/250,092
; PRIOR PELING DATE: 2000-11-20
; PRIOR PELING DATE: 2000-11-30
; PRIOR PELING DATE: 2001-11-30
; PRIOR FILING DATE: 2001-01-30
; PRIOR FILING DATE: 2001-01-30
; PRIOR FILING DATE: 2001-05-09
; PRIOR FILING DATE: 2001-05-09
; NUMBER OF SEQ ID NOS: 957066
; SOFTWARE: FastSEQ for Windows Version 4.0
; SOFTWARE: FastSEQ for Windows Version 4.0
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TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 108827.135
CURRENT FILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR FILING DATE: 2000-10-24
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                                                                                                                                                                                                                                                                                                                                           Score 14.8; DB 12;
Pred. No. 3.5e+02;
0; Mismatches 2;
                   PRIOR APPLICATION NUMBER: US 10/215,598
PRIOR FILING DATE: 2002-08-09
PRIOR PLILING DATE: 2001-08-10
PRIOR FILING DATE: 2001-08-10
NUMBER OF SEQ ID NOS: 1226818
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 851228
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Best Local Similarity 88.9
Matches 16; Conservative
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Matches 16, Conservative
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; ORGANISM: Homo sapien
US-10-301-480-851228
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US-09-925-065A-630983/c
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  Sequence 237819, Application US/10301480

Publication No. US2006005564A1

GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
CURRENT FILING DATE: 2002-01-21

PRIOR APPLICATION NUMBER: US/10/301,480

CURRENT FILING DATE: 2002-08-09

PRIOR APPLICATION NUMBER: US 10/215,598

PRIOR APPLICATION NUMBER: US 60/311,695

PRIOR APPLICATION NUMBER: US 60/311,695

PRIOR FILING DATE: 2001-08-10

NUMBER OF SEQ ID NOS: 1226818

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ 1D NO 237819
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TITLE OF INVENTION: in the Human Genome
TITLE OF INVENTION: in the Human Genome
TITLE OF INVENTION: in the Human Genome
FILE REFERENCE: 108827.137
CURRENT APPLICATION NUMBER: US/10/301,480
CURRENT APPLICATION NUMBER: US 10/215,598
PRIOR APPLICATION NUMBER: US 60/311,695
PRIOR FILING DATE: 2002-08-09
PRIOR FILING DATE: 2001-08-10
PRIOR FILING DATE: 2001-08-10
SEQ ID NOS: 1226818
SOFTWARE: FastSQ for Windows Version 4.0
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CURRENT APPLICATION NUMBER: US/10/301,480
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Best Local Similarity 88.9°
Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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US-10-301-480-237819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapien
US-10-301-480-851227
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US-10-301-480-851227/c
US-10-301-480-237819/c
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; Sequence 614777, Application US/09925065A
; Publication No. US20040181048A1
; Publication No. US20040181048A1
; GREERAL INFORMATION:
; APPLICANT: Wang, David G.
; TITLE OF INVENTION: Identification and Mapping of Single
; TITLE OF INVENTION: US-001040 Polymorphisms in the Human Genome
; FILE REFERENCE: 108827.135
; CURRENT APPLICATION NUMBER: US 60/243,096
; PRIOR PILING DATE: 2000-10-24
; PRIOR PILING DATE: 2000-11-20
; PRIOR APPLICATION NUMBER: US 60/252,147
; PRIOR APPLICATION NUMBER: US 60/250,092
; PRIOR PILING DATE: 2000-11-20
; PRIOR FILING DATE: 2000-11-30
; PRIOR FILING DATE: 2000-11-30
; PRIOR FILING DATE: 2000-11-30
; PRIOR FILING DATE: 2000-11-16
                                                                                                                                                                                                                                                                                                           Length 599;
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Pred. No. 3.5e+02;
0: Mismatches 2; Indels
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Pred. No. 3.5e+02;
0; Mismatches 2;
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SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 994662
LENGTH: 599
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Best Local Similarity 88.9
Matches 16; Conservative
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Best Local Similarity 88.9
Matches 16; Conservative
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CNGANISM: Homo sapiens
US-09-925-065A-614773
                                                                                                                                        TYPE: DNA
CRGANISM: Homo sapien
US-10-301-480-994662
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US-10-301-480-381253/c
; Sequence 381253, Application US/10301480
; Sequence 381253, Application US/10301480
; Publication No. US20060057564A1
; GENERAL INFORMATION:
; APPLICANT: Wang, David G.
; TITLE OF INVENTION: Identifiction and Mapping of Single Nucleotide Polymorphisms
; TITLE OF INVENTION: in the Human Genome
; TITLE OF INVENTION: in the Human Genome
; FILE REFERENCE: 10887.137
; CURRENT APPLICATION NUMBER: US/10/301,480
; CURRENT FILING DATE: 2002-11-21
; PRIOR APPLICATION NUMBER: US 60/311,695
; PRIOR FILING DATE: 2001-08-10
; NUMBER OF SEQ ID NOS: 1226818
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 381253
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Publication No. US200600575641

GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: In the Human Genome
TITLE OF INVENTION: IN THE SET OF STATES TO S
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Best Local Similarity 88.9%; Pred. No. 3.5e+02;
Matches 16; Conservative 0; Mismatches 2;
         PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR FILING DATE: 2000-11-20
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-05
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FREESEQ for Windows Version 4.0
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US-09-925-065A-305234
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; ORGANISM: Homo sapien
US-10-301-480-381253
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US-10-301-480-994662/c
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LENGTH: 589
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AC008753 Homo sapi
AC17052 Homo sapi
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Result No.

Homo sapiens

ORGANISM

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432 8.6 2 431.4 8.6 2 431.4 8.6 2 431.4 8.6 2 430.8 8.6 1 430.8 8.6 1 430.8 8.6 1 430.8 8.6 1 430.6 8.6 1 430.6 8.6 1 430.6 8.6 1 430.6 8.6 1 430.6 8.6 1 430.7 8.6 1 430.8 8.6 2 430.8 8.6 2 430.8 8.6 2 430.8 8.6 2 430.8 8.6 2 430.8 8.6 2 430.8 8.6 3 430.8 8	20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	338 423.6 8.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3
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ALIGNMENTS

RESULT 1.*

47438977

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B368 bp DNA linear PRI 29-OCT-2003

DEFINITION HOmy sapiens phospholipase A2, group IB (pancreas) (PLA2G1B) gene, complete cds.

ACCESSION A7438977

VERSION A7438977.1 GI:37953284

KEYWORDS

SOURCE HOMO sapiens (human)

/product="phospholipase A2, group IB (pancreas)"
/protein_id="AAR05441.1"
/brotein_id="AAR05441.1"
/db xref="G1:37953285"
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AITCSSKNKECEAFICNCDRNAAIGFSKAPYNKAHKNLDTKKYCQS" Hominidae, Homo.

I (bases 1 to 8168)
Rieder, M.J., Livingston, R.J., Daniels, M.R., Chung, M.-W.,
Rieder, M.J., Livingston, R.J., Daniels, M.R., Chung, M.-W.,
Schackwitz, W.S., Sherwood, J.K., Witrak, L.A. and Nickerson, D.A.
Direct Submitssion
Submitted (16-OCT-2003) Genome Sciences, University of Washington, 1705 NE Pacific, Seattle, WA 98195, USA
To cite this work please use: NIEHS-SNPs, Environmental Genome
Project, NIEHS ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).

Local/on/Qualifiers

1. 8368 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, /product="phospholipase A2, group IB (pancreas)" join(911. .944,2644. .2803,3603. .3730,6347. .6471) /gene="PLA2GIB" join(875. .944,2644. .2803,3603. .3730,6347. .6548) /gene="PLA2G1B" / 1605...1669 / rpt_family="L2" / rpt_type=dispersed / 1638...2188 / gene="PLA2G1B" / note="Region not scanned for variation" / rpt_family="Alu" 354. - 496 /note="Region not scanned for variation" 875. .6548 /gene="PLA2G1B" /organism="Homo sapiens" mol_type="genomic DNA" /db_xref="taxon:9606" 101. 257 rpt_family="MIR" /rpt_type=dispersed 205 /replace="a" 326. 538 /rpt_family="Alu" /rpt_type=dispersed 354. 496 /gene="PLA2GIB" /frequency="0.01" /replace="g" 1319. .1588 /rpt_family="Alu" /rpt_type=dispersed 1174. 1307 /rpt_family="Alu" /rpt_type=dispersed 1286 /gene="PLA2G1B" /frequency="0.02" /replace="t" /frequency="0.01" /replace="a" frequency="0.01" /frequency="0.03" /replace="a" gene="PLA2G1B" codon_start=1 repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region misc_feature misc_feature variation variation variation variation variation sonrce TITLE JOURNAL REFERENCE AUTHORS gene mRNA CDS FEATURES COMMENT

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This clone was originally isolated in the laboratory of Professor Graeme Bell, Howard Hughes Medical Institute and Departments of Biochemistry and Molecular Biology, and Medicine, The University of Chicago, Chicago, Chicago, Th. USA. The clone was provided by the laboratory of Dr. Roger Cox at The Wellcome Trust Centre For Human Genetics, Oxford, UK. Some contig information was also obtained from Yamagata et al., Nature 384:455-8 (1996).
                                                                                                                                                                                                                                                                                          This clone was derived from human PAC library RPCI-1, prepared by Pieter de Jong and coworkers at the Roswell Park Cancer Institute (http://bacpac.med.buffalo.edu) using the method described by Ioannou et al., Nature Genetics 6:84-9 (1994). The library is from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VECTOR: pCYPACZ
NEIGHBORIOS SEQUENCE INFORMATION:
NEIGHBORIOS SEQUENCE INFORMATION:
The clone sequenced to the left is 278C19; the clone sequenced to the right is 15E1. Actual start of this clone is at base position 1 of 166H1; actual end is at 122302 of 166H1.
from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                           one male donor.

The clone may be obtained either from Genome Systems, Inc (http://www.genomesystems.com) or Research Genetics, Inc. (http://www.resgen.com); or from Pieter de Jong.
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join(4560. 5056,13418. .13748,13882. .14034)
/gene="wuGsc:H166H1.1"
gene="unknown function; 60% similar to 25017"
(PID:9927403) (PID:9927402); H_166H1.1"
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2790_ 3077
'rpt_family="Alu"
3081_ 3139
/rpt_family="L"
3716_ 4020
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p09_.1940
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2063. .2362
/rpt_family="Alu"
2516. .2650
/rpt_family="Alu"
2674. .2730
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/db_xref="taxon:9606"
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/rpt_family="Alu"
1001. .1300
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239. .265
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440. .1745
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2735. .2788
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                                                                        MAPPING INFORMATION:
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Homo sapiens PAC clone 166H1 from 12q, complete sequence.
AC003982
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University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
4 (bases 1 to 122302)
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University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
                                                                                                TAACCAGTTACATATTCCTCCAGATTTTTGGGGCATACACTAGCTTTTTTTATTTGGGAA 5673
                                                                                                                                                                    AATTTCCATGTGCAGGCATACCTAATTTTTCTAAATGTCTATGTAGTATTCCATTTAAGG 4860
                                                                                                                                                                                                                                                           ATGTTCCATAATTTTTAAAATACATGCTTTAAAGTAGAAAACTAGGTTGGGCATGGTGG 4920
                                                                                                                                                                                                                                                                                                                                                       CTCACGCCTGTATCCCCAGCACTTTGGGAGGCCGAGGCAAATGGATCACTTGAGGTCCGGA 4980
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                          AATTTCCATGTGCAGGCATACCTAATTTTTTCTAAATGTCTATGTAGTATTCCATTTAAGG
                                                                                                                                                                                                                                                                                     ATGTTCCATAATTTTTAAAAATACATGCTTTAAAGTAGAGAAACTAGGTTGGGGCATGGTGG
                                                                        2 (bases 1 to 122302)
Bradshaw,H., Mu,X. and Ozersky,P.
The sequence of Homo sapiens PAC clone 166H1
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae; Homo.

1 (bases 1 to 122302)

Sulston, J. E. and Waterston, R.
Toward a complete human genome sequence Genome Res. 8 (11), 1097-1108 (1998)
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http://genome.wustl.edu/gsc
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Department of Genetics
Washington University
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Waterston, R.
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ALIGNMENTS

Human phopholipase A2 (PLA2G1B) DNA SeqID 1.

(first entry)

17-JUN-2004 ADJ 099 33)

XEXEXEX

ADJ09083 standard; DNA; 12174 BP

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for
comprising
of
human; gene; ds; fat reduction; fat deposition; phospholipase A2; PLA2G1B; chromosome 12q24; single nucleotide polymorphism; SNP; appetite suppressant; lipase inhibitor; exercise regimen; obesity; non-insulin dependent diabetes mellitus; NIDDM; cardiovascular disorder; hypertension; antidiabetic.
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P-PSDB; ADJ09984.
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Claim 1.; 5EQ ID NO 1; 116pp; English.

CC fat reduction relates to a novel candidate therapeutic agent useful for fat reduction and disorders related to fat depositions. Specifically, it refers to polymorphic variations in the phospholipase A2 (PLAZGIB) DNA, which is located on chromosome 12g24 and has been associated with central CC fat deposition. The present invention describes methods to detect the presence or absence of these single nucleotide polymorphisms of PLAZGIB, in particular G7328A and T918G3, and subsequently provide treatment that reduces fat deposition. This treatment may consist of an appetite cupperssant, a lipase inhibitor, a phospholipase inhibitor, an exercise regimen, a dietary regimen, psychological counselling, psychotherapy or a correspondent of team be used to treat both obssity and non-insulin cdeposition and it can be used to treat both obssity and non-insulin counselling suppersentension. As such, it exhibits antidiabetic activity. This could be sequence is the human PLAZGIB DNA of the invention.

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5159 5219 4619 4859 5039 5099 ö 4500 CTGGTCATCTCCAGTTCTTTTCTCACCTTGACTGCAAGATGAAACTCCTTGTGCTAGCTGT 4559 4799 4860 TGATCATAGCTCACCACACCTTCCAACTCGTGGGCTCAAGTGATCCTCCCACCTTACTCA 4919 ACTAAGTAGTTAGGCCAATCTCCCATTTATTTTATTTTTAATTTTTATTTTATTT 4979 180 360 420 480 540 600 99 120 CAGTCTCAAWTCGAGGTTCCCAGTGGGGCTTAAGGGCTCCTCTATTGGGGTTCCCTCAAG 240 GCTGGCACTTTTTCAACCTGCAAGTCTGAACTCAGATTGCCTGAGCTAAGAAAGCTTGCC 300 721 CTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCCTTTCTAATGCAGTATCCAGT 780 9 TGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCCT TTTTTTGTGTGTGTTTTTTTTGGTAGACAGGTTTTTCACCATGTTGGCCAGGCTGGGTGAC AGATCTCACTCCTCTGGAATGGGGGCCACAGGCCACAGCAAAAAAGGGGATGGCCAGGCCCCG 4740 GCTGGCACTTTTTCAACCTGCAAGTCTGAACTCAGATTGCCTGAGCTAAGAAAGCTTGCC CTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACCACCACCATGCCCAGCTAA TTTTTTGTGTGTTTTTTTGGTAGAGACAGGTTTTTCACCATGTTGGCCAGGCTGGAC TITATITICITITITICCAGACAGGGTCTTGCTCTATCACCCAGGCTGGAGTTCAGTGGCA TTTATTTTCTTTTTCCAGACAGGGTCTTGCTCTATCACCCCAGGCTGGAGTTCAGTGGCA TGATCATAGCTCACACACCTTCCAACTCGTGGGCTCAAGTGATCCTCCCACCTTACTCA TACTTTATTTTATTTTGAGACGGGCTCACTCTGTCGCCCAGGCTGGAGTGCGGTGGCG TGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCCT CTGGTCATCTCAGTTCTTTTCTCACCTTGACTGCAAGATGAAACTCCTTGTGCTAGCTGT Gaps DB 12; Length 12174; Sequence 12174 BP; 3220 A; 2996 C; 2739 G; 3219 T; 0 U; 0 Other; .; 0 0; Indels ACTAAGTAGTTAGGCCAATCTCCCATTTATTTATTTATT ; Score 4997.8; Pred. No. 0; 8; Mismatches Query Match
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QQ O	5280	TTCCTTACTTATCACATTTATTATTATTATTATTATTGAGACAGAGICTTGCTTGT 5339
۸۵ ز	841	CGCCAAGGCTGGAGTACAGTGGGATCTCGGCTCACTGCAAGCTCCACCTGCTGGGTT 900
QQ ;	5340	CGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGCTTCACTGCAAGCTCCACCTGCTGCTGCTAAGGTT- 5599
g S	5400	CACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCACTAAAAGGCGCCTGCCACCACCACGG 5459
λ̈́o	961	CCCCGCTAATTTTTTTTAATAAAGACGGGGTTTCATCGTGTTAGCCAGGATGG 1020
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QQ	5520	rcrearcreardacerrardarcecerecerecereceadadergeregarracad 5579
ογ	1081	GCATGAGCCACCGTGCCCGGCCTTATCACATTATTATTATTTTTTTT
qq	5580	GCATGAGCCACCGTGCCCGGCCTTATCACATTTATTATTATTGTTTTTCTCTCCCACTA 5639
à i	1141	GGTTGTAAGCTCCATGAGGGTTAGAGATATTATTATTATTATTATTATTATTA
QQ O	5640	GGTTGTAAGCTCCATGAGGTTAGAGATTATTATTATTATTATTATTATTATTA
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ò	1261	AGTAAGTGCTCAATAAATATTCACTGGATAAACAGTGCAGATAGTTTAAAACTATCTGAC 1320
q	5760	AGTAAGTGCTCAATAAATATTCACTGGATAAACAGTGCAGATAGTTTAAAACTATCTGAC 5819
ογ	1321	CTAGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAAGCAGAGTTTGCAGTGAGTG
qq	5820	chadddaddchdaddcaddaancdcdaadccdddaadcaddatrrccadraactd s879
yo 4g	1381	381 AAATCGTGTCACTGCACTCCAACCTGGGCAACAGAGCAAGACTCCCATCTCAAAAAAAA
}	1441	AAAAAACTATCAGGCCTAGGTGGCACATGCCTGTAATCCTAGCTGAGGCGGTAAGG 1500
В В	5940	AAAAAACTATCAGGCCTAGCTGGGTGGCACATGCCTGTAATCCTAGCTGAGGCGGTAGGG 5999
ò	1501	TCCCAGAAGAAGAAGAAAAAGAAGAAAGAAGATATATATA
QQ	6000	TCCCAGAAGAAGAAGAAGAAAAAAGAAGAAGAAGATATATAT
ò	1561	
Db	0909	GATATAAACTTTATATATATAAAGTTTTCATTAAAAAAAA
٥y	1621	TCACTTTACCAGGTTCCTGGGTCCAACGGTCTTCAGAGGAGGCAGCTGGCAGGGGGCCAGG 1680
QQ	6120	rcactitaccaggirccigggircaacggreitcagaggaggeagerggeagggeagg 6179
ò	1681	GAGGCAGCGTGGGACCCGAGGGAGCAGCAGTGTCCCCGGGGTGCTGCCAGCC 1740
Dp	6180	daggeagederegeaecegaggaggaggaaggaggaggaggeecegggggggg
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qq	6240	GATTTGAACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGACAGCGGCATCAGCCCTC 6299
ολ	1801	GGGCCGTGTGGCAGTTCCGCAAATGATGATGCGTGATCCCGGGAGTGACCCCTTYT 1860

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ADI35082 standard; DNA; 12174 BP

AD135082 ID AD1350 XX

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The invention relates to diagnosing a predisposition to fat deposition or leanness in a subject comprising detecting the presence or absence of a polymorphic variation associated with fat deposition at a polymorphic site in a PLA2G1B nuclectide sequence in a nucleic acid sample from a cubject, where the presence of the polymorphic variation in defect. The polymorphic predisposition to fat deposition in the subject. The polymorphic cub present sequence. The method is useful for diagnosing a guantine at position of leanness in a subject, and consequently for diagnosing a predisposition to non-insulin dependent diabetes mellitus (NIDDM) in a subject and conditions such as hyperinsulinemia, hypertension, glucose intolerance, dyslipidemia, hypertension, glucose intolerance, dyslipidemia, hypertension, glucose intolerance, dyslipidemia, presentive measures. The present sequence represents a human PLA2G1B nucleotide sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Diagnosing a predisposition to fat deposition or leanness, useful for diagnosing a predisposition to e.g. diabetes or hypertension, comprises detecting the presence of a polymorphism in the PLA2G1B nucleic acid from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
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                                                          PLA2GIB; fat deposition; leanness; polymorphism;
non-insulin dependent diabetes mellitus; NIDDM; hyperinsulinemia;
hypertension; glucose intolerance; dyslipidemia; hypercoagulability;
microalbuminuria; human; gene; ds.
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Human PLA2G1B nucleotide seguence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-JUN-2002; 2002US-0392361P.
                                                                                                                                                                                                                                                                                                                                                                                                                          27-JUN-2003; 2003WO-US020830
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SEQU-) SEQUENOM INC.
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                              ACKCTACATAAATATCTATTATGGAAAGTGGAAGGCATCTATAATCCTACTACTACGAAAGA 4740
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                                                                                                                                                          CTCACGCCTGTATCCCAGCACTTTGGGAGGCCGAGGCAAATGGATCACTTGAGGTCCGGA 4980
                                                                                                                                                                  CTCACGCCTGTATCCCAGCACTTTGGGAGGCCGAGGCAAATGGATCACTTGAGGTCCGGA 9479
GTAATCTTATTGTTTATTTTGGTTATAAAGTAAACAAGCCAAAAGTAATGCAACTTCAA 4680
                                                                                                                                                                                                                                                                                                           Human, ds. gene, SNP, single nucleotide polymorphism; pancreatitis,
pancreatic cancer, Phospholipase A2 groupIB, PLA2GIB, gene therapy;
haplotype, genotype, chromosome 12q23-q24.1; transgenic, drug screening.
        GTAATCTTATTGTTTTTTTGGTTATAAAAGTAAAACAAAGCCAAAAGTAATGCAACTTCAA
                                         ACKCTACATAAATATCTATTATGGAAAGTGGAAGGCATCTATAATCCTACTACCAAAGA
                                                                                                                                    ATGTTCCATAATTTTTAAAAATACATGCTTTAAAGTAGAAAACTAGGTTGGGCATGGTGG
                                                              TAACCAGTTACATATTCCTCCAGATTTTTGGGGCATACACTAGCTTTTTTATTTGGGAA
                                                                                                                           ATGTTCCATAATTTTTAAAATACATGCTTTAAAGTAGAGAAACTAGGTTGGGCATGGTGG
                                                                                             AATTTCCATGTGCAGGCATACCTAATTTTTCTAAATGTCTATGTAGTATTCCATTTAAGG
                                                                                                                                                                                                                                                                                                                                                                                         /note= "Single nucleotide polymorphism"
replace(1968,A)
/*tag= b
/label= SNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Single nucleotide polymorphism"
                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Single nucleotide polymorphism"
1053. .9613
                                                                                                                                                                                                                                                                                             Human Phospholipase A2, groupIB (PLA2G1B) gene
                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
replace(3845,A)
                                                                                                                                                                                                   GTTTGAGACCAGCCTGGACAA 9500
                                                                                                                                                                                          GTTTGAGACCAGCCTGGACAA 5001
                                                                                                                                                                                                                                                                                                                                                                                                                                               /product= "Pla2G1B"
1053. .4086
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/number= 2
5946. .6744
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'label= SNP
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The invention relates to an isolated human Phospholipase A2, Group IB (pancreas) (PLA2GIB) polynucleotide comprising a sequence which is a colymorphic variant for a reference sequence for the PLA2GIB gene or its fragment, or a polymorphic variant of a reference sequence for a PLA2GIB conductor, or a polymorphic variant of a reference sequence for a PLA2GIB conductor, predicting the haplotype pair for the PLA2GIB gene of an individual, predicting the haplotype pair for the PLA2GIB gene of an individual, identifying an association between a trait and at least one haplotype pair of the PLA2GIB gene, an isolated genotyping oligonucleotide for detecting a polymorphism in the PLA2GIB gene, a recombinant non-human organism expresse a PLA2GIB protein concoded by the first uncleotide sequence or by the polymorphic variant of a reference sequence or by the polymorphic variant of a reference sequence for the PLA2GIB protein or sequence, an isolated polypeptide comprising a sequence which is a polymorphic variant of a reference sequence for the PLA2GIB protein or trageting PLA2GIB, a computer system for storing and analysing craspering pLA2GIB wariant is useful in studying the expression and function of PLA2GIB variant is useful in studying the expression and carrivity (e.g. pancreatitis and pancreatic cancer) and for therapeutic correction of PLA2GIB protein, and for testing the efficacy of the PLA2GIB isogenes in vivo, for in vivo screening and testing of drugs trageted against PLA2GIB protein, and for testing the efficacy of therapeutic agents and compounds in a bological system. The antibody is custivity of PLA2GIB as well as on the binding affinity of candidate drugs or the present sequence is the PLA2GIB gene which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel isolated human Phospholipase A2, Group IB pancreas polynucleotide, for therapeutic purposes, for studying expression and function of the polynucleotide and for expressing the phospholipase protein.
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                                                                                                                  *tag= j
|abel= SNP
'note= "Single nucleotide polymorphism"
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                                                                     eplace (6844, A)
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99.8%;
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Best Local Similarity
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Matches 4993; Conservative 8; Mismatches 0; Indels 1; Gaps 1; Qy 1 CTGGTCATCTCAG-TTCTTTTCTCACCTTGACTGCAAGATGAAACTCCTTGTGCTAGCTG 59 Db 4015 CTGGTCATCTCAGTTTTTTTTCACCTTGAAGATGAAACTCCTTGTGCTAGCTG 4074 Qy 60 TGCTGGTCAAGGTAGGCAAGTCTCCCCGGCTCCACCCGCCTTTCTCTCCCCAAGTGAGCT 119 Db 4075 TGCTGCTCAAGGTAGGCAAGTCTCCCCGGCTCCACCCGCCTTTCTCTCCCCAAGTGAGCT 4134 Qy 120 AAGATCTCACTCTCTGGAAATGGGGGCCACAGGCCACAGCACACCACACCACACCACCCCCC	180 GCAGTCTCAAWTCGAGGTTCCCAGTGGGGCTTTAAGGGCTCCTCTATTGGGGTTCCCTCAA 4 195 GCAGTCTCAAWTCGAGGTTCCCAGTGGGGCTTTAAGGGCTCCTCTATTGGGGTTCCCTCAA 4 240 GGCTGGCACTTTTTCAACCTGCAAGTCTGAACTCAGATTGCCTGAGCTAGAAAGCTTGC 2 300 CTTTATTTTCTTTTTTCCAGACGGCTCTGCTATTGCCTGAGCTAGGAAGCTTGC 3 315 CTTTATTTTCTTTTTTCCAGACGGCTCTGCTCTAACTCAGCTGGAGTTCAGTGC 3 316 ATGATCATTATTTTTCCAGACAGGCTCTTGCTCTATCACTGGAGTTCAGTGC 4 317 ATGATCATTATTTTTTCCAGACAGGCTCTTGCTCTATCACTGCTGAGTTCAGTGC 4 318 ATGATCATAGTTAGGCCCAACTCCAGTGGGCTCAAGTAGTAGTTCATTATTTTTTTT	THISTORGEGGACTTGTAGCTCTCAAGTAGCTGGCACACACACCACCATGCCACATGCCACATGCCAAGTAGCTGGCACACACA

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New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or

98US-0095212P

03-AUG-1998;

(UYEC-) UNIV EAST CAROLINA

WPI; 2000-205971/18

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CAATATGGTGAAACCCTATCTCTATAAAAATACAAAAATTAGCTGGGTGTAGTGATGCA
                                                                                                                                                                                                                                                                                                                                                 8575 TTCCTGAAGGTAAGCAGAGATACGTAAATTATATGTAATAAAGTTTAAATGCATTTTAAC
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                                                                                                                                                                                      <u> AGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACACAGCGAGAC</u>
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The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%) which targets conclete acids involved in bronchoconstriction, allergies, and/or inclaimmation. The ON can have antinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating cofficients including lung diseases and diseases whose secondary impeded respiratory distress syndrome, pain, cystic impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasis to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the cast and prostate cancer. The reduction of the adenosine content of the bronchoconstriction and inflammation. Add32313 to Add35312 represent the conchoconstriction and inflammation. Add32313 to Add35312 represent cinvention, which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 1885, and then the last 185 concent to previously named sequences. SEQ ID NO:1 to 185, but the sequence concent invention. N B. Sequences given in the disclosure of the present invention. N B. Sequences given in the disclosure of the present invention. N b. including the sequences given in the disclosure of the present invention. N b. including the sequences given in the disclosure of the present invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 1056-1057; 1343pp; English
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99WO-US017712.

03-AUG-1999;

WO200009525-A2

Homo sapiens

bronchodilator, antiinflammatory, analgesic,

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine (A) content antisense oligonuclectides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                   ATGATAAAAGGACTTATATTTTTAGAGCCATAGGATCATTTCTCCTGAAGCATCTTGGC
                                                                                  3128 GAAGTCATCCCCACCTGTTCCTCAGAGTGGGCAGGTGAGGGCTGACCTATTGCTCTCTGCAC
                                                                                                                                       TTACTCCTATCTCAGCTGTCCCTCCCACTTTCCAGGTGCTGCCAGACACAGGACAATGACAGC
                                                                                                                                                                                                              3248 TACGACCAGGCCAAGAAGCTGGACTGTAAATTTCTGCTGGACAACCCGTACACCCAC
                                                                                                                                                                                                                                                               3308 ACCTATTCATACTCGTGCTCTGGCTCGGCATCACCTGTAGCAGGTTTATCCCTTCC
                                                            GAAGTCATCCCCACCTGTTCCTGAGAGTGGGCAGGTGAGGGCTGACCTATTGCTCTGCAC
                                                                                                                     TTACTCCTATCTCAGCTGTCCCTCCCACTTTCCAGGTGCTGCCAGACACATGACAACTGC
                                                                                                                                                                                  TAYGACCAGGCCAAGAAGCTGGACAGCTGTAAATTTCTGCTGGACAMMCCGTACACCCAC
 ATGATAAAAGGACTTATATTTTTTCAAGCCATAGGATCATTTCTCCTGAAGCATCTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human, airway disorder, bronchoconstriction, lung inflammation, surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human low adenosine antisense oligonucleotide related sequence #2790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                  AAF21223 standard; DNA; 3375 BP
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The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides the A is replaced by a 'Universal' or alternative base.

Disclosure; Page 1135-1136; 1592pp; English.

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(in) can have respiratorly, inclinitalizations, autinitalization, autinitalization, autinitalization, autinitalization, autinitalization, autinitalization and ractivity of target polypeptides associated with ungirespiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulina and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, cytokines and chemokine receptors, cytokine and non-specific enzymes, binding proteins, adenosine receptors, by system (CMS) and peripheral nervous and non-nervous system coeptors, contral nervous and non-nervous system ceeptors, cansing respiratory obstruction and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy (iss) and/or surfactant hypoproduction which are associated with a disease or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergy (RBS), pain, cystic fibrosis (CR), allergic rhinitis (AR), pulmonary obstructive pulmonary disease (CDPD), hypertension, emphysema, chronic obstructive pulmonary disease (CDPD), hypertension, emphysema, chronic obstructive pulmonary disease (CDPD), hypertension, emphysema, chronic obstructive pulmonary disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification
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Pred. No. 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstruction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, conformed adenosine sensitivity, levels of adenosine (A) or (A) receptors, conformed adenosine sensitivity, levels of adenosine (A) or (A) receptors, conformed adenosine sensitivity, levels of adenosine (A) or (A) receptors, conformed adenosine sensitivity, levels of adenosine ammal. The oligonucleotides are derived from a gene encoding or regularing expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung expression of activity and carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treading a respiratory, lung or malignant disease. The administered consociated composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to composition such and such activity and activity or to increase the degradation of the target mRNA or to inflammation, allergies and/or bronchoconstriction and/or lung inflammation, allergies and/or bronchoconstriction and/or lung with a disease or condition such as pulmonary vasconstriction, inflammation, allergies and/or bronchoconstriction, respiratory transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to the oligonucleotides into products that free adenosine into the system content of the anti-sense oligos corresponding to the oligonucleotides into product that free adenosine into the system content of the series of the oligonucleotides into product that the content of the 
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    disease; cancer; bronchitis;
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Best Local Similarity 98.5%;
Matches 2846; Conservative
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Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma: respiratory distress syndrome; palh; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                    GAAACCCTGTCTCTACTAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCTGTA
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                                                    ACATAGTAAGTGCTCAATAAATAATTCACTGGATAAAACAGTGCAGATAGTTTAAAAACTATC
                                                                                                                        CAGGGAGGCAGCGTGGGACCCGAGGAGCAGGAAGGCAGTGTGCCCCGGGGTGCTGCCA
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                                                                                                      TGACCTAGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAAGCAGAGTTTGCAGTGA
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Sequence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;

Query Match
53.8%; Score 2690.8; DB 3; Length 6771;
Best Local Similarity 98.5%; Pred. No. 0;
Matches 2846; Conservative 6; Mismatches 18; Indels 18; Gaps

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Op	1478	ACTAAGTAGTAGGCCAATCTCCCATTTATTTTATTTTAATTTTTATTTTATTTTTATTT 1537
'n	481	TACTITATITITATATITITGAGAGGGGCTCACTCTGTCGCCCAGGCTCGAGGCGGGGGGG 540
QQ	1538	racititatititatititidadacegeciteaciteites-ceaecitesaciecegecesse
8	541	TGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCT 600
Db	1597	TGATCTCAGATCACTACAACCTCCATCTCCT-GGTTCAAATAATTCTCTTGCCTCAGCCT 1655
ολ	601	CTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACCACCATGCCCAGCTAA 660
qa	1656	CTCAAGTAGCT-GGACTTGTAGCTCTCAAGTAGCTGGCCACACACCCATGCCCAGCTAA 1714
٥,	661	
qq	1715	TITITIGIGITITITITIGGIAGAGAGAGAGTITICACCATGITIGGCCAGGCIGGGIGAC 1774
۲ ک	721	721 CTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCT-AATGCAGTATCCAG 779
Dp	1775	CTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCTAAATGCAGTATCCAG 1834
δ	780	TITCCTIACTIATCACATITATIATTATTATTATTATTGAGACAGAGTCTTGC
QQ	1835	iticcitacitatacactitatiatraticitatiatraticacacacacacticcitic 1894
ò	840	TCGCCAAGGCTGGAGTACAGTGCGATCTCGGCTCACTGCAAGCTCCACCTGCTGGGT 899
qq	1895	rececaadecreaaracadreceareredecreacrecaereceeer 1954
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Dp	1955	reacecearrerececercaecereceaaraecressacraaa-ececereceae 2013
δ	960	GCCCGCTAATTTTTTGTATTTTAATAAAGACGGGGTTTCATCGTGTTAGCCAGGATG 1019
DΡ	2014	GCCCCGCTAATTTTTTGTATTTTTAATAAGACGGGGTTTCATCGTGTTAGCCAGGATG 2073
٥٨	1020	
Dβ	2074	GTCTCGATCTCATGACCTTGTGATCCGCCTCGCCTCCCCAATGCTGGATTACA 2131
٥٨	1080	
QQ	2132	GGCATGAGCCACCGTGCCCGGCCTTATCACATTTATTATTATTGTTTTTTCTCTCCCACT 2191
۵,	1140	
qa	2192	
٥'n	1197	
Dp	2252	
ογ	1257	ACATAGTAAGTGCTCAATAAATATTCACTGGATAAACAGTGCAGATAGTTTAAAACTATC 1316
Op	2312	
٥'n	1317	
Dp	2372	rcacctaggaagcrtgaggcaggaarggcgrgaacccgggaagcacagrtrgcagrga 2431
δλ	1377	
Dp	2432	249
ò	1437	149
QQ	2492	7
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qq	2552	7

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oligonucleotides which do not trigger
sm, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                         Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleachies and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and
GAAGTCATCCCCACCTGTTCCTGAGAGTGGGCAGGTGAGGGCTGACCTATTGCTCTGCAC
               GAAGTCATCCCCACCTGTTCCTGAGAGTGGGGCAGGTGAGGCTGACCTATTGCTCTGCAC
                                                    TTACTCCTATCTCAGCTGTCCCTCCCACTTTCCAGGTGCTGCCAGACACATGACAACTGC
                                                                   TAYGACCAGGCCAAGAAGCTGGACAGCTGTAAATTTCTGCTGGACAMMCCGTACACCCAC
                                                                                                                                                              ACCIATICATACTCGTGCTCTGGCTCGGCAATCACCTGTAGCAGTAGGTTTATCCCTTCC
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activating peptide factors and transmitters, transcription factors, chemokines and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system receptors, CNS and peripheral nervous and non-nervous system receptors, binding proteins and malignancy associated proteins. The artisense oligonuclecides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy(ies) and/or surfactors in hypoproduction which are associated with a disease or (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome the present invention

Sequence 6771 BP; 1815 A; 1570 C; 1439 G; 1947 T; 0 U; 0 Other;

1655 1537 1357 TITATITITITITITICCAGACAGGGTCTTGCTCTATAACCCAGGCTGGAGTTCAGTGGCA 1417 CTCAAGTAGCT-GGACTTGTAGCTCTCAAGTAGCTGGCACACCACCATGCCCAGCTAA 1714 CTGGTCATCTCAGTTCTTTTCTCACCTTGACTGCAAGATGAAACTCCTTGTGCTAGCTGT 1121 GCTGCTCACAGGTAGGCAAGTCTCCCCGGCTCCACCCGCCTTTCTCTCCCCAAGTGAGCTA 1181 TGATCATAGCTCACCACAGGCTTCCAACTCGTGGGCTCAAGTGATCCTCCCACCTTACTCA 1477 TACTTTATTTTATTTTTGAGACGGGCTCACTCTGTCG-CCAGGCTGGAGTGCGGTGGGC 240 420 GCTGCTCACAGGTAGGCAAGTCTCCCCGGCTCCACCCGCCTTTCTCTCCCAAGTGAGCTA 120 AGATCTCACTCCTCTGGAATGGGGGCCACAGGCCACAGCAAACAGGGATGGCCAGCCCCG 180 GCTGGCACTTTTTCAACCTGCAAGTCTGAACTCCAGATTGCCTGAGCTAAGAAAGCTTGCC 300 TTTTTTGTGTGTTTTTTTTGGTAGAGACAGGTTTTCACCATGTTGGCCAGGCTGGGTGAC 720 CAGTCTCAATTCGAGGTTCCCAGT-GGGCTTAAAGGCTCCTCTATTGGGGTTCCCTCAAG CAGTCTCAAWTCGAGGTTCCCAGTGGGGCTTAAAGGGCTCCTCTATTGGGGTTCCCTCAAG GCTGGCACTTTTTCAACCTGCAAGTCTGAACTCAGATTGCCTGAGCTAAGAAAGCTTGCC TTTATTTTTTTTTTCAGACAGGGTCTTGCTCTATCACCCAGGCTGGAGTTCAGTGGCA TGATCATAGCTCACCACAGCTTCCAACTCGTGGGCTCAAGTGATCCTCCCACCTTACTCA ACTAAGTAGTTAGGCCAATCTCCCATTTATTTTATTTTTAATTTTTATTTTATTT TACTTTATTTTATTTTTGAGACGGGCTCACTCTGTCGCCCAGGCTGGAGTGCGGTGGCG rearcresearcacracaaccrecarcreer-serreaaaraarrererreecresecr CTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACACCACCATGCCCAGCTAA TGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCCT CTGGTCATCTCAGTTCTTTTCTCACCTTGACTGCAAGATGAAACTCCTTGTGCTAGCTGT Gaps Length 6771; 18; 18; Indels DB 3; Score 2690.8; Pred. No. 0; 6; Mismatches 53.8%; Query Match 53.8 Best Local Similarity 98.5 Matches 2846; Conservative 1062 1122 1182 1239 1298 1418 1478 1538 121 241 1358 361 1597 661 61 181 301 421 481 541 601 g q g 셤 g g g ò ò g ò ò g ⋧ ઠે ò ò ò 셤 ò

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oy D	721	CTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCT-AATGCAGTATCCAG 779
oy D	780	TTTCCTTACTTATCACATTTATTATTATTATTATTATTAGAGACAGAGTCTTGCTTG
oy Ob	840	TCGCCAAGGCTGGAGTACAGTGCGATCTCGGCTCACTGCAAGCTCCACCTGCTGGGT 899
<u>ک</u> ج	900	
ò	96	CCGCTAATTTTTTTTTTTAATAAGACGGGGTTTCATCGTGTTAGCCAGGATG 101
a &	2014	GCTAATTTTTTGTATTTTTAATAAAGACGGGGTTTCATCGTGTTTGGGGGAT GATCTCATGACCTTGTGATCCGCCTGCCTCGCGCCTCCCAAAGTGCTGGGATTAC
q	2074	
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ò	1140	AGGTTGTAAGCTCCATGAGGTTAGAGATTATTATTATTATTATTATTATTATTATTA 1196
QQ	2192	AGGITGIAAGCICCAIGAGGIIAGAGAITAITAITAITAITAITAITAITAITAITA
S S	1197	TTATTATTATTATTATATCTGTTCACTGCTGTATCTCTAGCTCCTAGGACCGGGCCTGGC 1256
λ'n	1257	31
Db	2312	catagtaagtgeteaataaatatteaetggataaacagtgeagatagtttaaaaetate 237
o o	1317	TGACCTAGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAAGCAGAGTTTGCAGTGA 1376
ò	37	CTGAAATCGTGTCACTGCACTCCAACCTGGGCAACAGAGCAAGACTCCATCTCAAAAA 143
qq	2432	CAACAGAGCAAGACTCCATCTCAAAAA 249
Sy G	1437	AAAAAAAACTATCAGGCCTAGCTGGGTGGCACATGCCTGTAATCCTAGCTGAGGGGGGT 1496
ò	1497	AGGGTCCCAGAAGAAGAAGAAGAAAAAAGAAGAAGATATATAT
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٥y	1557	
qq	2612	crcraccc 267
Sy Bb	1617	ACTITICACTITACCAGGITCCTGGGICCAACGGTCTTCACAGGAGGCAGCTGGCAGGGGT 1676
ò	1677	CCGAGGGAGCAGGAAGGCAGTGTGTCCCCGGGGTGCTGGC
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ò	1737	GACCGATTTGAACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGCCGMCAGCGCATCAGC 1796

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                           CCTCGGGCCGTGTGGCAGTTCCGCAAAATGATCAAGTGCGTGATCCCGGGGAGTGACCCC 1856
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GACCGATTTGAACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGACAGCGCGCATCAGC 2850
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                                                                                TTYTTGGAATACAACACTACGGCTGCTACTGTGGCTTGGGGGGGCTCAGGCACCCCCGTG
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Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                        Human, antisense, lung dysfunction, nasal airway dysfunction; antisinflammatory steroid; ubiquinone; antisinflammatory; antiallergic; antisathmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lung inflammation; respiratory disease; ds.
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, Shahabuddin S;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                          Human nucleic acid sequence.
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Tang L,
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Miller S,
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The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the cutive agent comprising an oligonucleotide antisense to the contintiation codon, coding region, 5, or 3 end genomic flanking regions, c5 and 3 intron-axon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antisinflammatory steroid and ubiquinone is useful control the invention case in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a ccomposition antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a ceptrany strength as subject, for reducing or depleting levels of for entaining antisity to adenosine, reducing or depleting levels of antiinflammatory strength bronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung inflammation, lung allergies, or a respiratory disease or condition. Once: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO car fip. wipo.int/pub/published_pct_sequences

Query Match

Query Match

Query Match

Dest Local Similarity 98.5%; Pred. No. 0;

13;

18; Gaps

18; Indels

6; Mismatches

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Aguilar

Pabalan J,

Katz E,

Sandrasagra A, Ka ,, Shahabuddin S;

Li Y, San Tang L,

Miller S,

Nyce JW,

WPI; 2003-093058/08.

23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P.

WO200285309-A2 31-OCT-2002. (EPIG-) EPIGENESIS PHARM INC

Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and

bronchodilating agent.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrensizic agonist; respiratory disease; pulmonary vasconometriction; respiratory diserses syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                                                                                                                                                                                                                                                                             ATGATAAAAGGACTTATATTTTTTCAAGCCATAGGATCATTTCTCCCTGAAGCCATCTTGGC
                                                                                                                                                                                                                                                                                                                                      GAAGTCATCCCCACCTGTTCCTGAGAGTGGGCGAGGTGAGGCTGACCTATTGCTCTGCAC
                               TAGCAGTGGTTGTCACTGCACCTTCT-GAATACAGGATTTTACTGTATTCTTGCAACCAT
                                                                        GTTAAAAATCGCTTTCAGGCCAGGCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGG
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This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating contractant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating cytuction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) contractions for adding a carrier and for use of the kit. The composition of the invention has antialpergic, antialfammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung or inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction of the trarget mRNA or containsmantion, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction of the trarget manamaton, allergies, asthma, impeded respiration; respiratory bulmonary costruction rejection, pulmonary hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction.

Confidential particular planeral content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free addenses and the present of the oligonucleotides into products that free addenses and the particular and thereby and the particular an
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Pred. No. 0;
Claim 15; SEQ ID NO 12161; 763pp; English.
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Matches 2846; Conservative
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GAATGGCGTGAACCCGGGAAGCAGAGTTTGCAGTG GAATGGCGTGAACCCGGGAAGCAGAGTTTGCAGTG AACCTGGGCAACAGGCAAGCAGAGTTTGCAGTG AACCTGGGCAACAGGCAAGACTCCATCTCAAAAA AACCTGGGCAACAGGCAAGACTCCATCTCAAAAA AACCTGGGCAACAGGCAAGACTCCATCTCAAAAA TGGGTGGCAACAGGCAAGACTCCTACTGCAGGCGG GAAAAAGAAAAAAAAAA	
TTCAAG 129	GCCCGCTAATTTTTTGTAATTAATAAAGACGGGTTTCATCGTGTTAGCCAGGATG 1019

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42000 AĞGTTĞĞĞCATĞGTĞĞCTÇACĞCCTĞTATCCCAĞCACTTTĞĞĞAĞĞCCĞAĞĞĞAAATĞĞA 41941
to a method for treating cancers involving administering to a patient an inhibitor of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer drug candidate and monitoring the effect of the anticancer drug candidate and with expression of a CAP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample and for screening for a bioactive agent capable of modulating the activity of a CAP protein. The CA nucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a tissue. This sequence represents a human CA gene of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pot_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ds; diagnosis; non-blood disease; solid tumor; gene expression; peripheral blood mononuclear cell; renal cell carcinoma; prostate cancer; head/neck cancer; differential expression.
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                                                                                                                                                                                                                                                       13; Length 42360;
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Pred. No. 3.5e-74;
1; Mismatches 0;
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Best Local Similarity 99.8%;
Matches 456; Conservative
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                          GAAACCCTGTCTCTACTAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCCTGTA
                                                                                                                                                                                                3630 ATGATAAAAGGACTTATATTTTTTAAGCCATAGGATCATTTCTCCTGAAGCATTTTGCGC
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                                                                 ACCCCAGCTACTTGGGAGACTGGAGTTGGAGGTTTCAGTGAGCCCAAGGTCGTGTCACTGCT
                                                                               ATGATAAAAGGACTTATATTTTTCAAGCCATAGGATCATTTCTCCTGAAGCATCTTGGC
                                                                                                                          el human cancer associated protein encoded within open reading f
cancer associated gene, useful as targets for diagnosing cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  an; cancer-associated protein; CAP; cancer-associated cancer; cytostatic.
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                                                                                                                                                                                                                                                                                                                                            The invention relate to a method of diagnosing (M1) non-blood disease such as solid tumor by providing peripheral blood sample of human having non-blood disease, and comparing an expression profile of specific genes in the peripheral blood sample to reference expression profile of the genes, where each of the genes is differentially expressed in peripheral blood monounclear cells (PBMCs) of patients having the disease as compared to PBMCs of normal humans. The method is useful for diagnosing non-blood disease such as solid tumor. The solid tumor is chosen from renal cell carcinoma (RCC), prostate cancer and head/neck cancer. The peripheral blood sample comprises enriched PBMCs. The peripheral blood sample (claimed). (M1) is useful for identifying genes that are differentially expressed in peripheral blood samples
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 isolated at different stages of progression, development or treatment of RCC and/or other solid tumors. This sequence corresponds to a gene that is differentially expressed and detected by the method of the invention. (Note: this sequence is not given as part of the printed specification but was obtained from WIPO in electronic format at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCC----TGTAACCCCAGCTAC
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                                                                                                                                                                                                                                                              Diagnosing non-blood disease such as solid tumor, involves comparing differential expression profile of specific genes in peripheral blood sample of subject with reference expression profile of specific genes.
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The invention relates to cancer-associated proteins (CAP) and the cancer-associated (CA) nucleic acids encoding them. The invention also relates to a method for treating coneers involving administering to a patient an inhibitor of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer contacting a tissue sample derived from a cancer cell with an anticancer on expression of the CA gene. The CAP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample and for screening for a bioactive agent capable of modulating the activity of a CAP protein. The CA nucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a tissue. This sequence represents a human CA gene of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at Etp.wipo.int/pub/published_pct_sequences
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                                                                                                                                                                                                                                                                                                                                                                                                    Novel human cancer associated protein encoded within open reading for cancer associated gene, useful as targets for diagnosing cancer.
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                                                                            2002US-00322281.
                                                                                                                                                             SAGR-) SAGRES DISCOVERY INC.
15-DEC-2003; 2003WO-US040081
                                                                                                                                                                                                                                               Morris DW, Malandro
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Recombinant nucleic acid useful for diagnosis and treatment of comprises a nucleotide sequence.
                                                                Cytostatic; carcinoma; lymphoma; cancer; human; gene;
                                         Human genomic sequence hCG26773
                                                                                                                                                                            01-MAR-2002; 2002US-00087192.
                                                                                                                                                     28-FEB-2003; 2003WO-US006235
                      (first entry)
                                                                                                                                                                                                 SAGR-) SAGRES DISCOVERY
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                                                                                      Homo sapiens
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carcinoma

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The present invention relates to novel DNA and protein sequences which are associated with carcinomas. The sequences are useful for: (i) for screening drug candidates; (ii) for screening of bioactive agent capable of bioactive agent capable of modulating the activity of CAP; (iv) for a bioactive agent capable of modulating the activity of CAP; (iv) for actinoma; (vi) for inhibiting the activity of CAP; (vi) for diagnosing carcinoma; (vii) for neutralizing the effect of CAP; (vi) for treating; (x) for diagnosing carcinoma or a propensity to carcinoma; and (xi) for determining Carcinoma are appeared (CA) gene copy number. In addition, the CA genes are useful as DNA vaccines and the CAP are useful as markers of carcinoma including lymphoma. The present sequence is one such CA coding carcinoma. The present sequence is one such CA coding carcinoma including lymphoma. The present sequence is one such CA coding US2002182586A1, for which no sequence data was published
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Claim 1; SEQ ID NO 100; Opp; English.
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Matches 888; Conservative
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Best Local Similarity
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ACN43914 standard; DNA; 160482 BP

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The present invention relates to novel DNA and protein sequences which are associated with carcinomas. The sequences are useful for: (i) for screening drug candidates; (ii) for screening of bioactive agent capable of carcinoma Associated Protein (GAP); (iii) for screening of a bioactive agent capable of modulating the activity of CAP; (iv) for inhibitual the activity of CAP; (iv) for carcinoma; (vi) for inhibitual the activity of CAP; (vi) for treating carcinoma; (vii) for neutralizing the effect of CAP; (vii) for treating carcinoma; (vii) for neutralizing the effect of CAP; (vii) for treating carcinoma; (vii) for a propensity to carcinoma; and (xi) for determing Carcinoma Associated (CA) gene copy number. In addition, the CAP genes are useful as DNA vaccines and the CAP are useful as markers of carcinoma including lymphoma. The present sequence is one such CA coding sequence. Note: This patent is an equivalent to basic patent
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Matches 906; Conservative
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Human intercellular adhesion molecule (ICAM1, ICAM4, ICAM5) genomic DNA.
                                                                                                                                                                       SNP detection; breast tumor; endocrine disease; gynecology and obstetrics; neoplasm; cytostatic; metastasis; gene therapy; RNA interference; intercellular adhesion molecule; ICAM1; gene therapy; RNA interference; intercellular adhesion molecule; ICAM1; ICAM4; ICAM5; chromosome 19; ds; SNP; single nucleotide polymorphism.
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'standard_name= "Single nucleotide polymorphism (SNP)"
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'standard_name= "Single nucleotide polymorphism (SNP)"
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2554 AAAAATGCTTTCAATAAATATATGATAAAGGACTTATATTTTTTCAAGCCATAGGATCA 2613 	2614 TITCICCTGAAGCAICTIGGCGAAGTCAICCCCACCTGTICCTGAGAGTGGGCAGGTGAG 2673 	2674 GGCTGACCIATIGCTCTGCACTTACTCCTATCTCAGCTGTCCCTCCCACTTTCCAGGTGC 2733	2734 TGCCAGACACATGCTAYGACCAGGCCAAGAAGCTGGACAGCTGTAAATTTCTG 2793 1		2854 AGCAGTAGGTTATCCCTTCCTTGACCTATGAATTCTAGTTGGTTCTCAGTAGGCCGGGG 2913 17740 GATTACAGGCTTGTGCCCCAGCTAATTTTTTTTTTACTAGAGATGAGGTT 17799	2914 GGAAATAATAGTAACAACAGCCATGATTTAGTGTTAATTTTCTTGGTTCTGGGCAGTGTC 2973	2974 TCCTTTAATCCTCAGAACAACACTATGGGATAGGTACAATTATCCTCACTTAACAGATAA 3033	3034 GAAAACTGAGGCTCAGAAGGCTGAGCTATTTGCCCAAGATCACACGCTTGTAAGTGGTG 3093	3094 ACAGTTTGGGGTTTTTTTTGTTGTTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCA 3153 17955TTTAAATTTTTTTTTTTTTTTTTTTTTTTGGACAGAGTCTCACTCTGTTGTTGTTTTTTTT	3154 TGAGCACAGTGGTACCATAGGTCACTGCAGCCTCAAACCTCCTGAGGGATCT 3213	3214 GCTGACCTCCAAGTAGCTGGGACTACGAGGTGCACCACCACCACGCTGAT 3273 18072 TCCTGCCTCAGCTTCCCGAGTAGCTGGGATTACAGGCCCGCGTCCCCACCACCTAGCTAAT 18131	3274 TAAAAAATTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTC 3333 18132 TTTTGTATTTTTAGTAGAGACACGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACTC 18189	3334 CTGGCTTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGC 3393	3394 CACCATGTGCGGCTACTTATTCTTTACATTCCATTTCCAATAGAATGTAAGATCCAC 3453 18250 CACTGCACACGGCCTTAAATTTTATTTATTTATTTATTTA	3454 AGAACAGGGATTACTGCCTATTTTCTTCCTTTTTTTGAGACAGAGTCTCACTTCATC 3513 18305	3514 ACCTCAACCTCCGTTCAGCTCACTGCAACCTCTGCCTCCGGGGTTCAAGYGATTCTCCTG 3573	3574 CCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTT 3633 18394 CCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCCACCACCACCACCGGCTAA-TTTTT 18452
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AATCACTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCCGAGACCACATCACGGCACĀTCT ATATAAACTTTATATATATATAAAAAAAAAAA	16362 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AGGCAGCGTGGGACCCGAGGAGGAGGAAGGCAGTGTGTCCC	CGGGGTGCTGGCAGACCGGTTTGAACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGC 		1837 -TGATCCCGGGGGGTGACCCCTTYTTGGAATACAACAACTACGGCTGCTGCTGTGGGCTTG 1895	1896 GGGGCCTCAGCCACCCCGTGGATGAACTGGACAAGTAAGT	TGGAGTGCCTGCCGGGGGGGGGGGGGCACGCCAAGGATCTCACGAGGCATACAAG	GGGACTTGCATATCTGCTAAGGATAACATATTTTGACTCTTGTCAA ACAGAGCTGCATGTGACTGCAGGCTGGAGTGCAGTGC	ATAAACAAATATGTTCCAAGAGCCCTGTAGCGAACGCACCCCGTTAGAGATGGAAAAAATACAAGAAAAAAAA	ATGACCGACGTGCAAAACAGTGGGCGATGCTGCCCTCCAGTGGCAGAATGTAGCAACAGT	AAACAICACAGCAACTAICCACGITTIITAGIAGAGAGGGGGGGAACTAICAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGA	CCTTCTGAATACAGGATTTTACTGTATTCTTGCAACCATGTTAAAAAT	- GGCTTTCAGGCCAGGCGGGGGCGGTCATCCCAGAATCCCAGAACTTTGGGAGGCCGAG GTTAATGCTGGAACTCATGCGGTGGCTCATGCGTAATCCCAGAACTTTGGGAGGCCGAG	GCGGGCGGATCATTGAGGTCAGGGGTTCGAGCCTGGCCAACATGGTGAAACCCT 	GTCTCTACTAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCTGTAACCCCAG		CCAAGGTCGTGTCACTGTGTCCAGCCTGGGTAACAGAGCAACTCTGTCTCAAAAAA

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The invention relates to cancer-associated proteins (CAP) and the cancer-associated (CA) nucleic acids encoding them. The invention also relates to associated (CA) nucleic acids encoding them. The invention also relates in this term of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer cury candidate and monitoring the effect of the anticancer drug candidate on expression of the CA gene. The CAP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample and for screening for a bioactive agent capable of modulating the crivity of a CAP protein. The CA nucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a cancer, involving determining the expression of a CA nucleic acid in a cancer, involving determining the approach of a CA nucleic acid in a cancer, involving actermining the approach of a CA nucleic acid in a cancer, involving actermining the approach form part of the printed the sequence date for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
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                                                             Human; cancer-associated protein; CAP; cancer-associated gene; CA; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel human cancer associated protein encoded within open reading frame of cancer associated gene, useful as targets for diagnosing cancer.
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tive 1; Mismatches 552; Indels
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Human cancer-associated (CA) gene HD07-065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 16; SEQ ID NO 448; 182pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SAGR-) SAGRES DISCOVERY INC.
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                                                                                                   ds; cancer; cytostatic
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                                                                                                                                                                                                                                  WO2004058146-A2.
                                                                                                                                                                    Homo sapiens.
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                                                                                                                                     TCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGT
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                                         TGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCTCCTGAGTAGCTGGAATTACAAGC
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adult respiratory distress syndrome; inflammatory bowel disease;
Crohn's disease; ulcerative colitis; periodontal disease;
granulocyte activation; chronic inflammation; allergy.
                                                                                        Human cDNA differentially expressed in granulocytic cells #140.
                                                                                                             viral infection; parasitic infection; protozoal infection; fungal infection; sterile inflammatory disease; psoriasis; rheumatoid arthritis; glomerulonephritis; asthma; thrombosis; cardiac reperfusion injury; renal reperfusion injury; ARDS;
                                                                                                      granulocytic cell; DNA chip; bacterial infection;
       ABK83569 standard; cDNA; 122888
(first entry)
                                                                                                                                                                           Homo sapiens.
                                                                         14-AUG-2002
                                                           ABK83569;
                             RESULT 20
                                     ABK83569
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WO200228999-A2.

11-APR-2002.

03-OCT-2001; 2001WO-US030821.

03-OCT-2000; 2000US-0237189P.

(GENE-) GENE LOGIC INC.

Vockley J; Yamaga S, Beazer-Barclay Y, Weissman SM,

WPI; 2002-435328/46.

Detecting granulocyte activation by detecting differential expression of genes associated with granulocyte activation, which serves as diagnostic markers that is useful for monitoring disease states and drug toxicity.

Claim 1; SEQ ID NO 140; 114pp; English.

The invention relates to detecting (MI) granulocyte (GC) activation (GCA), by detecting the level of expression of gene(s) (GB) identified by DNA chip analysis as given in the specification, and comparing the expression level to an expression level in an unactivated GC, where differential expression of GS is indicative of GCA. Also included are codulating (M2) GA by contacting GC with an agent that alters the expression of at least one gene in GS; (2) screening (M3) for an agent capable of modulating GCA or an inflammation (especially chronic) in a tissue, an allergic response in a subject, exposure of a subject to a profile; (3) detecting (M4) an inflammation (especially chronic) in a tissue, an allergic response in a subject, exposure of a subject to a pathogen or sterile inflammatory disease, by detecting the level of expression in a sample of the tissue of gene(s) from GS, where the level of expression in a sample of the tissue of gene(s) from GS, where the level of expression in a sample of the tissue of gene(s) from GS, mainflammation (specially chronic) or in a tissue having inflammation with an expent that modulates the expression of gene(s) from GS, where the listue inflammation in a tissue having inflammation with an expect that modulates the expression of gene(s) from GS in the tissue. M1 is useful for detecting GCA; M2 is useful for modulating GA, M3 is useful for screening an agent capable of modulating GA preferably in an expect of a subject to a pathogen or sterile inflammation; in a tissue, M3 is useful for exposure of a subject to a pathogen or sterile inflammation in a tissue, an allergic response in a subject, exposure of a subject to a pathogen or sterile inflammation in a tissue, an allergic response in a subject to exposure of a subject to a pathogen or sterile inflammation in a tissue, an allergic response in a subject or exposure of a subject to a pathogen or sterile inflammation in a tissue, an allergic response in a subject or exposure of a subject to a pathogen or sterile inflammation

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                                                                TTAATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGA
                                                                                                                   Human neuroblastoma cell line NB-1 1p36 nucleotide sequence SEQ ID
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Cytostatic, antisense therapy, co-repressor;
REI silencing transcription factor, COREST; antisense oligonucleotide;
developmental; hyperproliferative; disorder; neuronal cancer; ds.
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                                                                                                                              existing in the 36-position of the first chromosome short arm (1p36) in human neuroblastoma. Also described are base sequences from the 1p36 position of human neuroblastoma cell lines (NB-1 and MASS-NB-SCH-1), which are tumour suppressor genes in human neuroblastoma. The genes are tumour suppressor genes in human neuroblastoma. The genes are tumour markers and reagents in studying mechanism of tumour body formation, and gene diagonesis of tumours as well as in developing anticancer drugs. AAP97787 to AAF97829 represent PCR primers used in the exemplification of the present invention, and AAF97830 to AAF97874
                 Human 1936 homozygosity deletion domain from the 36-position of first chromosome short arm in human neuroblastoma cell lines, applicable e.g. in gene diagnosis of tumors as well as in developing anti-cancer drugs.
                                                                                                                                                                                                                                                                                                                                                                                                                                             ----TGGGCTCACTGCAACCTCCCCAGGTTCAAGTGATTCTCTTGCCTCGGTCT
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                                                                                                                  present invention describes a homozygosity deletion domain co
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                                                                                Page 93-95; 226pp; Japanese.
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                                                                                                                                                                               The invention relates to a new antisense compound comprising 8-50 nucleobases in length targeted to a nucleic acid molecule encoding a crepressor for REI silencing transcription factor (COREST), where the compound specifically hybridises with and inhibits the expression of COREST. The COREST antisense oligonucleotide has any of 72 specifically calaimed sequences of 20 bp, given in the specification. The methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of diseases or conditions associated with aberrant expression or activity of COREST, such as a developmental disorder and/or a hyperproliferative condition like neuronal cancer. The current sequence represents the human COREST genomic DNA sequence that was used to design antisense oligonucleotides of the invention.
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                                                                                 New antisense oligonucleotide compounds, useful for the diagnosis, prevention and/or treatment of conditions with aberrant expression or activity of COREST, such as developmental and/or hyperproliferative
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Pred. No. 1.2e-66;
3; Mismatches 948;
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Best Local Similarity 54.0%;
Matches 1222; Conservative
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  CCCAGAGGCGGAGGTTGCAGTGAGCCTAGATCACTCCATTGCACTCCAGCCTGGGCGACA 65548
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cytostatic; gene therapy; vaccine; metastasis; ds.
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04-FEB-2000;
02-MAR-2000;
02-MAR-2000;
11-MAR-2000;
11-MAY-2000;
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Ruben SM;
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01 - NOV - 2000; 2000US - 0244617P.
08 - NOV - 2000; 2000US - 0246476P.
08 - NOV - 2000; 2000US - 0246524P.
08 - NOV - 2000; 2000US - 024651P.
08 - NOV - 2000; 2000US - 024651P.
08 - NOV - 2000; 2000US - 024651P.
07 - NOV - 2000; 2000US - 024920BP.
17 - NOV - 2000; 2000US - 024921P.
17 - NOV - 2000; 2000US - 024921P
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06-DEC-2000;
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08-DEC-2000;
11-DEC-2000;
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) acmino acid sequences given in AAM82170 to AAM9921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to pupplement tab patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the
Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                        Disclosure; SEQ ID NO 32692; 3071pp + Sequence Listing; English.
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protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54942 to AAK64950 and AAW82169 represent sequences used in the exemplification of the present invention
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                                                                                                                                                              Query Match 8.3%; Score 415.6; Best Local Similarity 54.4%; Pred. No. 1.16 Matches 1324; Conservative 2; Mismatches
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peroxisome proliferator-activated receptor-alpha, PPAR-alpha modulator,
PPAR-alpha associated disorder; hyperproliferative disorder, human, gene;
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(x) for diagnosing carcinoma or a propensity to carcinoma, and (xi) for determining Carcinoma Associated (CA) gene copy number. In addition, the CA genes are useful as DNA vaccines and the CAP are useful as markers of carcinoma including lymphoma. The secent sequence is one such CA coding sequence. Note: This patent is an equivalent to basic patent US2002182586A1, for which no sequence data was published
                                                                                                 Sequence 196686 BP; 53978 A; 42758 C; 43862 G; 55372 T; 0 U; 716 Other;
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       The invention describes a compound, having a sequence comprising 8-80 bp targeted to a nucleic acid encoding PPAR-alpha (peroxisome proliferator-activated receptor-alpha), that specifically hypridises with the nucleic acid encoding PPAR-alpha (peroxisome proliferator-acid encoding PPAR-alpha comprising 86001-bp sequence and inhibits expression of PPAR-alpha. Also described are: a method of inhibiting the expression of PPAR-alpha in cells or tissues; a method of screening for a modulator of PPAR-alpha; a diagnostic method for identifying a disease state; a kit or assay device comprising the compound; and a method of treating an animal having a disease or condition associated with PPAR-alpha. The oligonucleotide compound is useful for preparing a composition for treating hyperproliferative disorder e.g. cancer. This sequence represents a human peroxisome proliferator-activated receptor-alpha (PPAR)
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                                                                                                           ATTITAGICACIGAATAATAIGGCITAATTIGCITATACAICCICCIGCICCACTITAGA
                                                                        TIGITITGATICCACAAAICTITGCCCTITCCACAAACAAGGCCCTACATGTCCCCTTACA
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                                    TIGITATGACTITITCATATIGCCICAAACCITIATIGITACTGITITITCATIGITACT
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                                                                                                                                                                                                                                                                                                                                                                                         TGTCTTTTGTTTTTGAGACAGGGTCTCGCTCTGTTGCCCAGGCTGGAGTACAGTGGCACA 4787
 New isolated cancer associated nucleic acids comprising at least 10 contiguous nucleotides, useful for diagnosing, preventing and/or treating cancers such as leukemia and lymphoma.
                                                                                                           The present invention relates to cancer associated sequences (ADQ97025-ADQ98004). The sequences are useful for the diagnosis, prevention and/or treatment of cancer, such as leukemia and lymphoma. Note: The sequence data for this parent did not form part of the printed specification, but was obtained in electronic formate directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                           Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAATTTTTTTG
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                                                                                                                                                                                                                                                                          Score 413.6; DB 12; Length 215974;
Pred. No. 3.7e-66;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention comprises the nucleotide and amino acid sequences of the human guanine nucleotide binding protein (G protein) gamma 7 (GNG7). The invention specifically relates to the discovery of three novel polymorphic sites in the GNG7 gene. The GNG7 nucleotide and protein sequences are useful for screening for drugs which target GNG7 and may be used to treat (gene therapy) GNG7-related diseases (e.g. pancreatic cancer). The GNG7 nucleotide sequence and be used for haplotyping GNG7, genocyping GNG7 and predicting the haplotype pair for GNG7 in an individual. The present DNA sequence represents the human GNG7 gene
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useful in studying expression and function of the protein,
ening drugs to treat diseases e.g. pancreatic cancer.
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     Human; nootropic; neuroprotective; cytostatic; dermatological; virucide; imunosoppsessive; antibilflammatory; anti-HIV; antibacterial; vulnerary; antiparkinsonian; antisickling; antianaemic; antiatrhritic; cancer; antirheumatic; hepatotropic; cerebroprotective; antiinflammatory; antiallabelic; antilluler; antilloshan; antidomy antiparastic; cardiant; imune disorder; cardiovascular disorder; neurological disease; infection; nephrotropic; gene therapy; vaccine; ds.
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24-FEB-2000; 2000US-0118062BP.
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The invention relates to novel genes (ABA11004-ABA1534) and proteins (ABB14678-ABB18001) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant) agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcertive colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and parasitic infections. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : acids encoding 3224 human nervous system antigen polypeptides, for preventing, diagnosing and/or treating nervous system cancers
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TGGCTAATTTTTTGTATTTTTAGCAGAGATGGGGTTTTTACCATGTTGCCCAGGCTGGTCT

3621 5043 3681 5102 3741 5162 3801

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TCTCACTTCATCACCTCA - ACCTCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGGTTCA

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15-MAR-2000; 2000US-0198012FP.
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07-JUN-2000; 2000US-021980FP.
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      GCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTG 4471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated cancer associated nucleic acids comprising at least 10 contiguous nucleotides, useful for diagnosing, preventing and/or treating cancers such as leukemia and lymphoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to cancer associated sequences (ADQ97025-ADQ98004). The sequences are useful for the diagnosis, prevention and/or treatment of cancer, such as leukemia and lymphoma. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic formate directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Other;
                                                                              GATAAGAAAACTGAGGCTCAGAAGGCTGAGCTATTTGCCCCAAGATCACACAGCTTGTAAG
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Best Local Similarity
Matches 895; Conserv
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The invention relates to cancer-associated proteins (CAP) and the cancer-associated (CA) nucleic acids encoding them. The invention also relates to associated (CA) nucleic acids encoding them. The invention also relates to amethod for treating con anticancer activity in a inhibitor of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer on expression of the CAP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample cancer, involving determining the expression of a CAP mucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a cativity of a CAP protein. The CAP mucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a cativity of a CAP protein. The capen of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO.
                                                                                                                                                                                                                                                          98536 CTCAGTCTCTACTATAAATACAAAATTAGCTGGGCATGATGGTGCATGCCTGTGATCCC 98595
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                                                                                                                                          AGCTACTGGGGAGGCTGAGGTGGGAGGATCACCTGAGCCCCAGGACCCAGAGGTTGCAGTG
                                                                       AGCTACTCGGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTG
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Gaps

Length 227246; 48;

DB 13;

Score 405.8;

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Best Local Similarity 59.7 Matches 898; Conservative

Query Match

Pred. No. 1e-64; 1; Mismatches 558; Indels

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02-MAR-2000; 2000US-0186564P.

16-MAR-2000; 2000US-018974P.

16-MAR-2000; 2000US-018974P.

18-AFR-2000; 2000US-0199123P.

19-MAY-2000; 2000US-0199123P.

19-MAY-2000; 2000US-020515P.

26-JUN-2000; 2000US-021646FP.

30-JUN-2000; 2000US-021646PP.

07-JUL-2000; 2000US-021486P.

11-JUL-2000; 2000US-0217486P.

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11-JUL-2000; 2000US-0217496P.

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26-JUL-2000; 2000US-021829P.

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14-MG-2000; 2000US-022181P.

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(HUMA-) HUMAN GENOME SCI INC

Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.

Disclosure; SEQ ID NO 38839; 3071pp + Sequence Listing; English.

ANK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
proteins and polynucleotides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (I) expression. For
example, they may be used to treat disorders associated with decreased
expression by rectifying mutations or deletions in a patient s genome
that affect the activity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally, (I)
cuplynucleotides may be used to produce the secreted (I), by inserting the
nucleic acids into a host cell and culturing the cell to express the
protein. (I) proteins and polynucleotides may be used to prevent,
concers and cancer memune/haematopoietic-delived cells. AAK64703
cancers and cancer metastases of haematopoietic antigen genomic
concers and cancer munime/haematopoietic antigen genomic
sequences from the present invention. AAK54942 to AAK54950 and AAM82169
crepresent sequences used in the exemplification of the present invention

Sequence 11872 BP; 3363 A; 2615 C; 2631 G; 3263 T; 0 U; 0 Other;

4431

1479 5283 5223 5123 5063 4951 AGGCGCCTGCCACCCCGCCCGCTATTTTTTTTTTTTTTATAAGACGGGGTTTCAT 1003 4771 AAGTGCTGGGATTACAGGCATGAGCCACCGTGCCCGGCCTTATCACATTTATTATTT 1123 4651 5011 GITITITCTCTCCCCACTAGGTTGTAAGCTCCATGAGGTTAGAGATTATTATTATTATT 1183 1184 ATTATTATTATTATTATTATTATTATTATATATCTGTTCACTGCTGTATCTCTAGCTCCTAG 1243 4492 TTTATAGAAAAGTAGTACATGGTTTATTTTACAGCTTTATTGTTTTCGTAAAACTTATA 4372 4891 GACAGAGCCTGGCACATAGTAGTGCTCAATAAATATTCACTGGATAAACAGTGCAGATA 1303 GTTTAAAACTATCTGACCTAGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAAGCA 1363 643 703 823 943 523 TGGCCAGGCTGGGTGACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTT 763 883 rrcrccrccrccrcacrccrcacracrcccccrc cresearracasscareasccaccereccasccr-----rrsrrrrrrras GCTCCACCTGCTGGGTTCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAA GCTCCGCCTCCCGGGTTCACGGCATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGGCCTAT 5342 AGTITITAGAAAATATTTATTTGTTTTTTTTTTTTAGACAGAGTCTCGCTCTGTCACCCAG TTCTCTTGCCTCAGCCTCTAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACA TAGCCAGGATGGTCTTGATCTCTGACCGCGTGATCCGCCCATCTCGGCCTCCCAAAGTG ACAGAGTCTTGCTTTGTCGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGCTCACTGCAA ceretraeccaeeareercrrearcrecreaecreergarceeccarcreeecre 1650 CCGGGTTCAAGCGATTCTCCTGCCTCAGCTCCCAAGTAGCTGGGATTATACGCATGTAC ------iàairrricrairrraghagha 1364 GAGTITICCAGTGAGCTGAAATCGTGTCACTGCACTCCAACCTGGGCAACAGAGACT 4491 AGCCTCCCAAAGTGCTGGGATTACAGGAGTGAGCCACCGCCCCGGATTTTCAGAAATA 464 AATTTTTATTTTTATTTTACTTTATTTTTATTTTTGAGACGGGGCTCACTCTGTCGCCCAG GCTGGAGTGCGGTGGCGTGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAA CCACCATGCCCAGCTAATTTTTTGTGTGTTTTTTTTGGTAGAGACAGGTTTTTCACCATGT 4710 GAGTCTTGCTCCGTCGCCCAGACTGGAGTGAAATGGCATGATCTCGGCTCACTCTGCCTC 1424 CCATCTCAAAAAAAAAAAAAACTATCA----GGCCTAGCTGGGTGGCACATGCCTGTA Gaps Score 404; DB 4; Length 11872; Pred. No. 1.4e-64; 4; Mismatches 1484; Indels 163; 8.1%; Best Local Similarity 50.7 Matches 1695, Conservative CACCAGGCCTGGC-524 5282 5222 5177 5122 764 824 4950 4830 4770 1244 5062 944 4890 1004 1064 1124 1304 584 644 704 5010 884 Query Match d ò g В ò g ò 임 ò gg ò Ω à qq ò 엄 ò 유 ò Оb ò 임 ò Вþ ò 임 ò q ò g ò 8

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                                              Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
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24-FEB-2000; 2000US-018652BP.
24-FEB-2000; 2000US-0186464P.
02-MAR-2000; 2000US-0186350P.
16-MAR-2000; 2000US-0186350P.
17-MAR-2000; 2000US-019813FP.
19-MAY-2000; 2000US-019813FP.
19-MAY-2000; 2000US-0214866P.
28-JUN-2000; 2000US-0214866P.
28-JUN-2000; 2000US-0214867P.
11-JUL-2000; 2000US-021486P.
11-JUL-2000; 2000US-021486P.
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Pred. No. 1.4e-64;
4; Mismatches 1484; Indels 163;
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17-NOV-2000; 2000US-0249297P.
17-NOV-2000; 2000US-0249309P.
17-NOV-2000; 2000US-0249300P.
01-DEC-2000; 2000US-02599P.
01-DEC-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025198P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-0251868P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-0251989P.
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08-DEC-2000; 2000US-0251989P.
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08-DEC-2000; 2000US-0251989P.
                           2000US-0249218P.
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1776 GCCGCCGMCAGCGGATCAGCCCTCGGGCCGTGTGGCAGTTCCGCAAAATGATCAAGTGC 1835	CTCTACTAAAAATACAAAATTAGCCAAGCATGGTGGCAGGCA	3952 TTCGGGGGGCTAAGGCAGGAGAATCGCTTGAACTCGCGGGTGGAGGATGCAGTGAGCCAA 3893 1956 TGGAGTGCCTGCCGGGGGGGGGGGGCACACGCCAAGGATCTCACGAGGATGCAAAG 2015 1956 TGGAGTGCCTGCCGGGGGGGGGGGGGCACACGCCAAGGATCTCACGAGGATGAAAG 2015 3892 GATTGCACCTCCAGCCTGGGCAACGAGATCAAAACTCCGTCTCCAAAAAAAA	2016 GGGACTTGCATATCTAGGATAACATATTTTCACCTCTTGTCAAATAAACAAATATG 2075 3832 AAAAAAGTTTTTTTAGAGATGCAGTCTCACTATGTTGCCTAGGCTGGTCTCAAACTCT 3773	2076 TTCCAAGAGGACCCTGTAGCGACGCACCCCGTTAGAGATGGAAACAATGACGGACG			1 7 M	01 W	2368 GTTCGAGACCAGCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAATT 2427 	AGCCGGACATGGTGGCGAGCCCTGTAACCCCAGCTACTTGGGAGACTCA-GTTGGAGGT	2487 TTCAGTGAGCCAAGGTCGTGTCACTGCTGCGTAACAGAGCAACT 2539	CTGTCTCAAAAAAAAAAAGCTTTCAATAAATATGATAAAAGGACTTATATTTTTC CTGGGTGACGGAGCGAGCCCGTCCAAAAAAATAATAATAAAAAAAA	AAGCCATAGGATCATTTCTCCTGAAGCATCTTGGCGAAGTCATCCCCACCTGTTCCTGAG	2650 AGTGGGCAGGTGAGCTGACCTATTGCTCTGCACTTACTCCTACTCTGAGTGTCCCTCC 2719 1	2720 CACTTTCCAGGTGCTGCCAGACACATGCTAYGACCAGGCCAAGAAGCTGGACA 2779 3115 CTATGACTTAAAATATACTTGTACAAGGTAGCTGTAGGTAGCTCTAGACGGAAAAA 3060	2780 GCTGTAAATTTCTGCTGGACANMCCGTACACCCACCTATTCATACTCGTGCTCTGGCT 2839	

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                                                                                                                                                                                                                                                                                                                                                                                                                          Determining susceptibility of an individual to joint space narrowing, sateophyte development and/or joint pain comprises identifying whether the individual has at least one polymorphism in a polynucleotide encoding a protein.
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amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
proteins and polynuclocides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (I) expression. For
example, they may be used to treat disorders associated with decreased
comparession by rectifying mutations or deletions in a patient's genome
that affect the activity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally, (I)
complement the patients own production of (I). Additionally, (I)
complement the patients own production of (I) additionally, (I)
complement the patients own production of (I). Additionally, (I)
complement and host cell and culturing the cell to express the
protein. (I) proteins and polynucleotides may be used to prevent
cancers and cancer mecaateses of haematopoietic-derived cells. AAK64703
to AAK67694 represent human immune/haematopoietic antigen genomic
sequences from the present invention. AAK54912 to AAK54950 and AAM82169
crepresent sequences used in the exemplification of the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acids encoding human immune/hematopoietic antigen polypeptides, for preventing, diagnosing and/or treating cancers and metastasis.
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8.1%; Score 403.8; DB 4; Length 17173;
Best Local Similarity 54.9%; Pred. No. 1.6e-64;
Matches 1336; Conservative 2; Mismatches 904; Indels 191;
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01-DEC-2000; 2000US-0249300P.
01-DEC-2000; 2000US-0251060P.
05-DEC-2000; 2000US-0251988P.
05-DEC-2000; 2000US-0251988P.
06-DEC-2000; 2000US-0251988P.
06-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
08-DEC-2000; 2000US-025186P.
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08-DEC-2000; 2000US-025189P.
08-DEC-2000; 2000US-0251989P.
08-DEC-2000; 2000US-025199P.
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         17-NOV-2000;
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Human, phosphodiesterase, PDE, phosphoinositide-specific phospholipase gene therapy, vaccine, protein therapy, inflammatory disease, asthma; chronic obstructive pulmonary disease; rheumatoid arthritis; atopy, chromosome 2; gene, ds, enzyme; SNP, single nucleotide polymorphism.
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14741 CGGCACTGCAGGCTCTACCTACATCGCTCCATGAAACTTTCATAAAAAACCCATCAGGAA 14800
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14561 TIGTATTTTTAGGAGAGATGGGGTTTCACCATCTTGGCCAGACTGGTCTCAAACTCCCGA 14620
                                                                                                              14881 GAGCCTGGCCGGAATAAGATAATCTTAAACAATCATGGAGTGCTTAGCTAGTGCCAGACA 14740
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                           CCTCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACT 3751
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                                         CCTCAGGTAATCCACCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel isolated human phosphodiesterase peptide useful for diagnosing, preventing and treating disorders characterized by aberrant expression of the phosphodiesterase protein, and as immunogens to raise antibodies.
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Matches 882; Conservative 1; Mismatches 545; Indels 52; Gaps
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(DFRA/) DI FRANCESCO V.
(BEAS/) BEASLEY E M.
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P-PSDB; ABB99113.
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                                                                                            Human; immunosuppressive; antiarthritic; ds; antirheumatic; cytostatic; cardiant; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fungicide; opthalmalogical; vulnerary; secreted protein; rheumatoid arthritis; hyperproliferative disorder; cardiovascular disorder; cardiac arrest; cerebrovascular disorder; cerebral ischaemia; angiogenesis; nervous system disorder; Alzheimer's disease; infection; ocular disorder; wound healing; epithelial cell proliferation; skin ageing; food additive; preservative; antiproliferative.
                                                                                                                                                                                                                                                                                                                                            Human genomic DNA encoding partial novel secreted protein, Seq ID 1644
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17-MAR-2000;
18-APR-2000;
19-MAY-2000;
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27-SEP-2000; 2000US-02359345P.
29-SEP-2000; 2000US-02359345P.
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29-SEP-2000; 2000US-0235934P.
02-OCT-2000; 2000US-0237034P.
02-OCT-2000; 2000US-0237034P.
02-OCT-2000; 2000US-0237034P.
03-OCT-2000; 2000US-0237034P.
03-OCT-2000; 2000US-0237034P.
03-OCT-2000; 2000US-0237034P.
03-OCT-2000; 2000US-0237034P.
03-OCT-2000; 2000US-024178FP.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024186P.
03-OCT-2000; 2000US-024647FP.
03-NOV-2000; 2000US-024647FP.
03-NOV-2000; 2000US-024647FP.
03-NOV-2000; 2000US-024647FP.
03-NOV-2000; 2000US-024647FP.
03-NOV-2000; 2000US-0246524P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
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03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
03-NOV-2000; 2000US-0246528P.
2000US - 0226681P .
2000US - 0226868P .
2000US - 022782P .
2000US - 0228924P .
2000US - 0229343P .
2000US - 0229344P .
2000US - 0229345P .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0231414P
2000US-0231414P
2000US-02320B0P
2000US-023196BP
2000US-023196BP
2000US-0232397P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-SEP-2000; 2000US-0234274P.
25-SEP-2000; 2000US-0234997P.
25-SEP-2000; 2000US-023499P.
26-SEP-2000; 2000US-0235444P.
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2000US-0230437P.
2000US-0230438P.
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2000US-0231243P.
2000US-0231244P.
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08-NOV-2000; 2000US-0246610P.
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2000US-0233063P.
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2000US-0249211P.
2000US-0249212P.
2000US-0249213P.
 2000US-0249218P.
2000US-0249244P.
2000US-0249245P.
 2000US-0249209P.
2000US-0249210P.
 2000US-0249216P.
2000US-0249217P.
 2000US-0249264P.
2000US-0249265P.
 2000US-0249297P.
2000US-0249299P.
2000US-0249300P.
 2000US-0250391P.
2000US-0251030P.
2000US-0251988P.
 2000US-0256719P.
2000US-0251479P.
 2000US-0249214P.
2000US-0249215P.
 2000US-0250160P
 08-DEC-2000; 2000US-0251856P
08-DEC-2000; 2000US-0251868P
08-DEC-2000; 2000US-0251869P
 08-DEC-2000; 2000US-0251989P
08-DEC-2000; 2000US-0251990P
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17-NOV-2000;
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(HUMA-) HUMAN GENOME SCI INC

Ruben SM Rosen CA, Barash SC,

WPI; 2001-488783/53

New nucleic acid molecules encoding 461 human secreted proteins for diagnosing, preventing, treating or ameliorating medical conditions and used as food additives or preservatives.

Disclosure; SEQ ID NO 1644; 980pp; English

The invention relates to isolated nucleic acid molecules and their encoded secreted proteins. The nucleic acids and proteins are used to prevent treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. They are also used in diagnosing a pathological condition or susceptibility to a pathological condition. Antibodies to the proteins can also be used in alleviating symptoms associated with the disorders and in diagnostic immunoassays e.g. radioimmunoassays or enzyme linked immunosorbant assays (ELISA). Disorders which are diagnosed or treated include autoimmune consplasms of the breast or liver, cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. corneal infection, and many other disorders e.g. Alzheimer's disorders e.g. corneal infection, and many other disorders listed in the specification. The polypeptides con also be used to aid wound healing and epithelial cell proliferation, to prevent skin aging due to sunburn, to maintain organs before transplantation, for supporting cell culture of primary tissues, to regenerate tissues and in chemotaxis. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities, fat content, lipid, protein, carbohydrate, vitamins, minerals, cofactors and other nutritional components. The present can expend other nutritional components. The present content of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format

DB 4; Length 14176; 8.0%; Score 400.4; DB 4 60.5%; Pred. No. 6.6e-64; Query Match Best Local Similarity

3431

4302 3491 4422 3371 4482

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disorder; renal disorder;
 muscular disorder; respiratory disease; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; hyperproliferative disorder; inflammatory disease; allergic reaction; blood related disorder; cancer; immunosuppressive; antiinflammatory; cardiovascular; nephrotropic; cytostatic; antiallergic; thrombolytic; haemostatic; antiarteriosclerotic.
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 TAAACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCAAAGTCAGGAG
 CTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAATT
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 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 CCTGCATTAGAGGATGTTTGTTCATATTAAAAAAAAAATAACTCAGTTGGGCACAGTGACT
 ATTITITATGACAGITITATTITCCTITATAAAGAACTGATGGGCCAGGCACGCTGGCT
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 3271
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2000US-0220963P.
2000US-0220964P.
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2000US-0220964P.
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2000US-0225757P.
2000US-0225758P.
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 2000US-0225270P.
 2000US-0226868P.
 2000US-0228924P.
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 2001US-00764864
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 04-FEB-2000;
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 22-AUG-2000;
 18-MAR-2003
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 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTA
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
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 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 GTCTTGCTCTTTTCGTCAGAAAATTCCAAAAGTTTGTTGTTTACATTCCTGTTGGCATCA
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 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT------
 TATTGTGGCTTTAATTTGCACCTTCCTGATGATTAGTGATGTTCAGCATTTTTTTCATGT
 TTTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACT
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 GGCGCAATCTTGGCTCACTGCAACCTCTGCCTCTTGGGTTCAAGCAATTCTCTG-CCTCA
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 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 ------TTAGAGTTACTTGTAGATTCT
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCTGCTGACCTCA
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477;
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 The invention relates to human novel polypeptides and their associated polynucleotides. The polypeptides and polynucleotides are useful in gene therating, inhibiting or preventing neural disorders, immune system disorders (e.g. systemic lupus erythematosus, rhemmatoid arthritis and multiple sclerosis), muscular disorders, respiratory diseases (e.g. nasal polyps and sinusitis), reproductive disorders, cardiovascular disorders, pulmonary disorders, cardiovascular disorders (e.g. congenital heart defects, pulmonary disorders, cardiovascular disorders (e.g. congenital heart defects, pulmonary disorders (e.g. Hodgkin's disease and leart syndrome), renal disorders (e.g. septic shock, bursitis and leukaemia), inflammatory diseases (e.g. septic shock, bursitis and appendicitis), allergic reactions and conditions (e.g. asthma), blood appendicitis), allergic reactions and conditions (e.g. asthma), blood crelated disorders (e.g. thrombosis, atherosclerosis and myocardial infarction) and cancerous diseases. Sequences ABX73173-ABX74167 represent thuman novel polynucleotides of the invention
 ö
 New polypeptides and nucleic acids, useful in gene therapy for treating, inhibiting or preventing e.g. neural, immune system, muscular, respiratory, reproductive, gastrointestinal, pulmonary, cardiovascular orenal disorders.
 BP; 4220 A; 3223 C; 3059 G; 3674 T; 0 U; 0 Other;
 B.0%; Score 400.4; DB 8; Length 14176; Local Similarity 60.5%; Pred. No. 6.6e-64; les 859; Conservative 1; Mismarches 177
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2000US-0229343P.
2000US-0229344P.
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2000US-023423P.
2000US-023423P.
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2000US-023423P.
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2000US-023423P.
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 WPI; 2003-147444/14
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RUBEN S M.
BARASH S C.
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 29-SEP-2000;
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GGCGCAATCTTGGCTCACTGCAACCTCTGCCTCTTGGGTTCAAGCAATTCTCTG-CCTCA 4490
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT 3282
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 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTA 3642
 GCAGAGATGGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT 3702
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 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
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 CGGCTACTTATTTTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 1246 CAGTCTCGGCTCACTGCAACCTCAGCCTCTGGGTTCAAGCGATTCTCCTGCCTCAGCCT
 TAGAGATGTGGGTTTCACCATGTTGGCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGAT
 CTGCCCGCCTCCCTCCCATAGTGCTGGGATTACAGGTGTGAGCCACCACGCCGCCT
 ATTACTGTCTATTTTTTTTTTTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG
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 CITIAGAAGGCCAAAITIACAAAICIGAIGAAAGCIAIGAACCCICTCCCCAGAGAAIA
 CACACACACACACACACACACACACAGTTTTTTTTTAATGTTTGCAACTAAGACAAGAAA
 3610 ATTTTTTATGACAGTTTATTTTTTCCTTTATAAAGAACTGATGGGCCAGGCACGGTGGCT
 TTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 ATTACTGCCTATTTTCTTCCTTTCTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 TCCGTTCAGCTCACTGCAACCTCTGCCTCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
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 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 GATGGGATTTTTTTTTTCTTGTTGACTTG------TTAGAGTTACTTGTAGATTCT
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 GGATATTAGTCCTTTGTCTGATGCATAGTTTTGCAAATATTTTCTGCCATCCTGTGGATGA
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 CCTGCATTAGAGGATGTTTGTTCATATTAAAAAAAAAACTCAGTTGGGCACAGTGACT
 GCCTCTGGAGTAGCTGATTACAGGCCACCACCACCATGCCCAGCTAATTTTGTA--
 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT-----
 TITAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACT
 CCGGCCTTTTTTTT------
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 The present invention describes the use of irinotecan (1) or its derivative for the preparation of a pharmaceutical composition for treating colorectal, cervical, gastric, lung, ovarian or pancreatic cancer, or malignant glioma in a subject having a genome with a variant allele which comprises a cytochrome p450, subfamily IIIA (nifedipine oxidase), polyapeptide 5 (CYP3AS) polynocleotide (II). (I) and (II) have cytostatic activity. The therapeutic applications of (I) is improved, since it is possible to individually treat a subject with an appropriate derivative of (I). Therefore, undesirable, harmful or toxic effects are efficiently avoided. Unnecessary and potentially harmful treatment of those subjects who do not respond to the treatment with substances (nonresponders), as well as the development of drug resistances due to suboptimal desiral sequences used in the
 cancer
p450,
 3490 TITGAGACCAGCCTGGCCAACATGGCAAAACCCCCATCTTACTAAACATAGAAAATTAG
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTTCTACTAAAAATTAGG
 CTGGGTGTAGTGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAATT
 4423 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACTGCACTCCAGCCT
 3370 ACTIGAACCCAGGAGGCAGAGGTIGCAGTGAGCCGAGAATCGCATCATTGCACTCTAGCCT
 5;
 New use of irinotecan for preparation of compositions for treating in subject having genome with variant allele comprising cytochrome subfamily IIIA, polypeptide 5 polynucleotide, termed CYP3A5.
 Cancer; CYP3A5; irinotecan; pharmaceutical; malignant glioma; cytochrome p450; subfamily IIIA; nifedipine oxidase; polypeptide
 Cancer based on CYP3A5 related polynucleotide SEQ ID NO:660
 Disclosure; SEQ ID NO 660; 86pp; English
 (EPID-) EPIDAUROS BIOTECHNOLOGIE AG
 BP
 DNA; 177531
 23-JUL-2002; 2002WO-EP008219
 23-JUL-2001; 2001EP-00117608
 2002EP-00011710
 (first entry)
 cytostatic; gene; ds.
 WPI; 2003-268144/26.
 ACF62732 standard;
 WO2003013534-A2
 24-MAY-2002;
 Unidentified
 08-OCT-2003
 20-FEB-2003
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Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;

exemplification of the present invention

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 165367
 165137
 165839 -GTGATCCACCCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC 165781
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 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTA 3642
 3763 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG 3822
 4123 CACACACACACACACACTCACACACACAGTTTTTTTTTAATGTTTGCAACTAAGACAAGAAA 4182
 CCTGAGTAGCTGGGATTACAGGCGCCGCCACCATGCCCAGCTAATTTTGTATTTTTAG
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT
 3343 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
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 -----tritritritridaangaagicingcrertgeceaggeiggaggeg
 3643 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 165426 TATTGTGGCTTTAATTTGCACCTTCCTGATGATTAGTGATGTTCAGCATTTTTTTCATGT
 165306 GAIGGGAITITITITITICITGACITG------TIAGACITACITGEAGAITCT
 3104 TTTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGT
 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCA
 166015 GCCGCAATCTTGCCTCACTGCACCTCTTGCCTTCAAGCAATTCTG-CCTCA
 TTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 165780 CCGGCCTTTTTTTTTTTT------------
 3463 ATTACTGCCTATTTTCTTCTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 165473 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT------
 TITAAAACAATCITGACAACTITGCAGAATAAATACAATCITGCATTCTGCTTTTCACT
 165366 Trerregrearrarararararrareagaacrerecearerearricerarerrr
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 4003 IGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 165256 gearatriagicerrigatericaragaringeaaaratrirergeeareergaga
 CTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATA
 Gaps
 83;
 Indels
Score 400.4; DB 8;
Pred. No. 9.5e-64;
1; Mismatches 477;
 8.0%;
 Best Local Similarity 60.5
Matches 859; Conservative
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165533 crecececercecercecaradrecresariracas referencias crececececes
 165839 -GTGATCCACCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC 165781
 can be used for the preparation of a pharmaceutical composition for treating colorectal, cervical, gastric, lung, ovarian or pancreatic cancer, or malignant glioma in a subject, where the subject is a human (preferably African or Asian) or a mouse. The present sequence represents a sequence which is used in the exemplification of the present invention.
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT
 165593 TAGAGATGTGGGTTTCACCATGTTGGCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGAT
 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG
 3104 TITITITITITIGITGITGTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGT
 166075 Treacriterritritrisadaredadriciecierierrececadecreadricada
 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCA
 rrrrragradadargggdrrrcacrgrcrrggrcrggcrgrggrcrrgaarrccrgaccrc-
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 ------trititritrisaganggagicitgctgttgcccaggciggagtgcarggg
 165713 CAGICICGGCICACTGCAACCICCAGGGTICAAGCGAITCICCTGCCICAGCCT
 3643 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 165473 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT-----
 TITAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACT
 ricrrecrearricrararararrareadaderererecaristearriceracritri
 GATGGGATTTTTTTTTTCTTGTTGACTTG------TTAGAGTTACTTGTAGATTCT
 4003 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;
 TTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 CGGCTACTTATTTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 CCGCCTTTTTTTTTTTTT
 3463 ATTACTGCCTATTTTCTTCCTTTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 3523 TCCGTTCAGCTCACTGCAACCTCTCCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 Length 177531
 Score 400.4; DB 8; Length
Pred. No. 9.5e-64;
1; Mismatches 477; Indels
 8.0%;
 Matches 859; Conservative
 Similarity
 3164
 3283
 3883
 3403
 3823
 166015
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 165956
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 164837 ACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCATCATTGCACTCTAGCCT 164778
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 or
 The present invention describes a method for the use of irinotecan (I) its derivative for the preparation of a pharmaceutical composition for treating colorectal, cervical, gastric, lung, ovarian or pancreatic cancer, or malignant glioma in a subject having a genome with a variant allele which comprises a multidrug resistance protein 1 (MRP1) polynucleotide (II). (I) has cytostatic activity. (I) or its derivative
 Use of irinotecan or its derivative for preparation of a pharmaceutical composition for treating cancer in a subject having a genome with a variant allele comprising a multidrug resistance protein 1
 gene;
 165017 TARACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCAAAGTCAGGAG
 CTGGGTGTAGTGGATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGATT
 ATTTTTTATGACAGTTTATTTTTCCTTTATAAAGAACTGATGGGCCAGGCACGGTGGCT
 GCTTGAACCTGGGAGGCAGGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 irinotecan; colorectal cancer; cervical cancer; gastric cancer; lung cancer; walignant glioma; variant allele; multidrug resistance protein 1; MRP1; cytostatic;
 GGGCGACACAGCGAGACTCTATCTCAAAAAAAAATAAAA 4522
 cancer related nucleic acid SEQ ID NO:660
 Disclosure; SEQ ID NO 660; 100pp; English.
 AG
 (EPID-) EPIDAUROS BIOTECHNOLOGIE
 ADB20847 standard; DNA; 177531
 23-JUL-2001; 2001EP-00117608.
24-MAY-2002; 2002EP-00011710.
 23-JUL-2002; 2002WO-EP008200
 (first entry)
 ä
 WPI; 2003-354397/33.
 Kerb
 WO2003013533-A2
 polynucleotide
 Unidentified
 20-NOV-2003
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 20-FEB-2003
 MRP1 based
 4183
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166015 GGCGCAATCTTGGCTCACTGCAACCTCTGCCTCTTGGGTTCAAGCAATTCTCTG-CCTCA 165957
 ------TririringAganggacringcrgrngcccaggcrgagrgcaarggc 165714
 165653 CCTGAGTAGCTGGGATTACAGGCGCCCGCCACCATGCCCAGCTAATTTTTGTATTTTAG 165594
 CGGCTACTTATTTCTTTACATTCCATTCCAATAGAATGTAAGATCCACAGAACAGGG 3462
 3883 TTTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTTCACT 3942
 The invention relates to the novel use of irinotecan to treat a patient suffering from cancer. This involves determining if the patient has one or more variant alleles of the UGTIAl gene, and if the patient has one or more variant alleles, irinotecan is administered in an increased or decreased amount in comparison to the amount that is administered in the UGTIAL gene. The invention has cytostatic activity. A composition of the invention acts as a topoisomerase I inhibitor. The method is useful for treating a patient, an animal e.g. mouse or a human, preferably African or Asian, suffering from cancer such as colorectal, cervical, gastric cancer, lung, ovarian, pancreatic cancer or malignant gliona. The present sequence is udes in the exemplification of the invention.
 -GTGATCCACCCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC
 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTA
 166075 Treactretritritriteadaredacrecereretrecedadecedaderecado
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT
 165956 GCCTCTGGAGTAGCTGTTACAGGGCACCCACCACCATGCCCAGCTAATTTTTGTA--
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 CTGCCCGCCTCCGCCTCCCATAGTGCTGGGATTACAGGTGTGAGCCACCCCCGCCCTC
 3104 TTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGT
 TITITIGIAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 3463 ATTACTGCCTATTTTCTTCCTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 3643 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 3763 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG
 Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;
 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCGATCTGCTGACCTCA
 3523 TCCGTTCAGCTCACTGCAACCTCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT-----
 TATTGTGGCTTTAATTTGCACCTTCCTGATGATTAGTGATGTTCAGCATTTTTTTCATGT
 10; Length 177531;
 Score 400.4; DB 10; Length
Pred. No. 9.5e-64;
1; Mismatches 477; Indels
 8.0%;
ilarity 60.5%;
Conservative
 Query Match
Best Local Similarity
Matches 859; Conserv
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 165256 GGATATTAGTCCTTTGTCTGATGCATAGTTTGCAAATATTTTCTGCCATCCTGTGGATGA 165197
 165136 AGTACACACACACATCCACCTCTGTTACTCCCGTTACATCATGATGTTTC-ATCTGATGAAC 165078
 165077 ATTTTTTATGACAGTTTATTTTTCCTTTATAAAAGAACTGATGGCCCAGGCACGGTGGCT 165018
 164957 TITGAGACCAGCCTGGCCAACATGGCAAAACCCCATCTCTAAAACATACAAAAATTAG 164898
 165017 TAAAACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCAAAGTCAGGAG 164958
 4482
 4302
 CTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAATT 4422
 Use of irinotecan to treat cancer patient by determining if patient has variant alleles of UGT1A1 gene, administering increased/decreased amounts of irinotecan based on increased/decreased levels of UGT1A1 gene product.
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAATTAG
 CACACACACACACACACTCACACACACACAGTTTTTTTTAATGTTTGCAACTAAGACAAGAAA
 CCTGCATTAGAGGATGTTTGTTCATATTAAATTAAATAACTCAGTTGGGCACAGTGACT
 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 CTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATA
 irinotecan; cancer; UGT1A1; cytostatic; topoisomerase I inhibitor; colorectal cancer; cervical cancer; gastric cancer; lung cancer; ovarian cancer; pancreatic cancer; palignant glioma; uridine diphosphate glycosyltransferasel member A1; gene; ds.
 Disclosure; SEQ ID NO 660; 107pp; English
 gene sequence SEQ ID NO:660
 AG
 BP
 (EPID-) EPIDAUROS BIOTECHNOLOGIE
 DNA; 177531
 23-JUL-2002; 2002WO-EP008217
 2001EP-00117608
2002EP-00011710
 (first entry)
 Kerb R;
 WPI; 2003-289896/28.
 standard;
 WO2003013536-A2
 Human UGT1A1
 23-JUL-2001;
24-MAY-2002;
 04-DEC-2003
 Heinrich G,
 20-FEB-2003
 4183
 4063
 4363
 164897
 4483
 ADB87936
 4423
 ADB87936
 4303
 Homo
 RESULT 41
ADB87936/
ADB87936/
AC ADB8
XX ADB8
XX ITID
XX ITID
XX OVAT
XX WO20
XX WO20
XX WO20
XX BP 20-F
XX BP 23-J
PR 23-J
PR 23-J
PR 23-J
PR 23-J
PR 23-J
PR 24-M
XX WE CEPI
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Gaps

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TTTTTAGTAGAGATGGGGTTTCACTGTCTTGGTCAGGCTGGTCTTGAATTCCTGACCTC- 165840
 165533 checedechedecheceanaghechedenthacadenendadecaedecedecedecen 165474
 CCTGAGTAGCTGGGATTACAGGCGCCCGCCACCATGCCCAGCTAATTTTTGTATTTTTAG 165594
 165593 TAGAGATGTGGGTTTCACCATGTTGGCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGAT 165534
 3763 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG 3822
 The invention relates to the novel use of irinotecan or its derivative for the preparation of pharmaceutical compositions for treating colorectal, cervical, gastric, lung, ovarian or pancreatic cancer, or malignant glioma in a subject having a genome with a variant allele which comprises a multidrug resistance I (MDR1) polynucleotide. A composition of the invention has cytostatic activity. The invention is useful for the preparation of pharmaceutical compositions for treating colorectal, cervical, gastric, lung, ovarian to r pancreatic cancer, or malignant glioma in a subject (preferably human, more preferably African or Asian) or a mouse. The present sequence is used in the exemplification of the
 New use of irinotecan for preparation of pharmaceutical compositions for treating cancer in subject having genome with variant allele comprising multidrug resistance 1 polynucleotide.
 165839 -GTGATCCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC
 3104 TITITITITITIGITGITGITTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGT
 TTGACTTCTTTGTTTTTTTTTGAGATGGAGTCTCGCTGTGTTGCCCAGGCTGGAGTGCAGT
 166015 GGCGCAATCTTGGCTCACTGCAACCTCTGGCTTCAAGCAATTCTCTG-CCTCA
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT
 165956 GCCTCTGGAGTAGCTGTGATTACAGGGCACCCACCACCATGCCCAGCTAATTTTTGTA--
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 ATTACTGCCTATTTTCTTCCTTTCTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTGTATTTTTA
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 3164 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGGATCTGCTGACCTCA
 TTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 165780 CCGGCCTTTTTTTTTT----------
 ------TITITITITIGAGAGICITIGCTGTTGCCCAGGCTGGAGTGCAATGGCG
 3523 TCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;
 Gaps
 8.0%; Score 400.4; DB 10; Length 177531; 60.5%; Pred. No. 9.5e-64;
 83;
 1; Mismatches 477; Indels
 Disclosure, SEQ ID NO 660; 130pp; English
 Conservative
 2003-268145/26
 Similarity
 Matches 859;
 3224
 3283
 3643
 3403
 165898
 3343
 3463
 165764
 3583
 165653
 3703
 Query Match
 Local
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 TTTGAGACCAGCCTGGCCAACATGGCAAAACCCCATCTCTAATAAACATACAAAAATTAG 164898
 165136 AGTACACACACACATCCACCTCTGTTACTCCCGTTACATCATAGTTTC-ATCTGATGAAC 165078
 165018
 164958
 ACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCATCATTGCACTCTAGCCT 164778
 165256 GGATATTAGTCCTTTGTCTGATGCATAGTTTGCAAATATTTTCTGCCATCCTGTGGATGA 165197
 GTCTTGCTCTTTTCGTCAGAAATTCCAAAAGTTTGTTGTTTACATTCCTGTTGGCATCA 165137
 4482
 4302
 TAAACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCCAAAGTCAGGAG
 165077 ATTTTTATGACAGTTTATTTTTCCTTTATAAAAGAACTGATGGGCCAGGCACGGTGGCT
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTCAT
 GATGGGATTTTTTTTTTCTTGTTGACTTG------TTAGAGTTACTTGTAGATTCT
 CTGGGTGTAGTGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGATT
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 CTTTAGAAGGCCAAATTTACAAATCTGAAGGCTATGAACCCTCTCCCCCAGAGAATA
 CACACACACACACACACTCACACACACTTTTTTTTTAATGTTTGCAACTAAGAAA
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAATTAG
 CCTGCATTAGAGGATGTTTGTTCATATTAAATAAATAACTCAGTTGGGCACAGTGACT
 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 lung cancer; ovarian cancer; pancreatic cancer; malignant glioma;
multidrug resistance 1; MDR1; cytostatic; human; Cyp3A5; MRP1; MDR1;
 irinotecan; colorectal cancer; cervical cancer; gastric cancer
 Human MDR1 related DNA sequence SEQ ID NO:660.
 (EPID-) EPIDAUROS BIOTECHNOLOGIE AG.
 DNA; 177531
 23-JUL-2002; 2002WO-EP008218
 23-JUL-2001; 2001EP-00117608
24-MAY-2002; 2002EP-00011710
 (first entry)
 Α,
 standard;
 Kerb
 WO2003013537-A2
 Homo sapiens
 Heinrich G,
 04-DEC-2003
 20-FEB-2003
 3943
 4063
 4123
 4183
 4243
 164837
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 165366
 65306
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 ADB96919;
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24-MAY-2002;
 Heinrich G,
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 165956
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 TAPARCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCAAAGTCAGGAG 164958
 TTTGAGACCAGCCTGGCCAACATGGCAAAACCCCATCTCTAATAACATACAAAATTAG 164898
 ACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCATCATTGCACTCTAGCCT 164778
 165136 AGTACACACACACATCCACCTCTGTTACTCCCGTTACATCATAGTTTC-ATCTGATGAAC 165078
 CTGGGTGTGGTCATGCACGCCTGTAGTCTCAGCTACTTGAGGCTGAGGCAGGAGAATC 164838
 165306 GATGGGATTTTTTTTTTTTTTGACTTG------TTAGAGTTACTTGTAGATTCT 165257
 165196 GTCTTGCTCTTTTCGTCAGAAATTCCAAAAGTTTGTTTTACATTCCTGTTGCATCA 165137
 ds.
 ATTTTTTATGACAGTTTATTTTCCTTTATAAAGAACTGATGGGCCAGGCACGGTGGCT
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAATTAG
 rigriggicaritigianaritaritargadacigicarcitaritigcciacitriti
 165256 GGATATTAGTCCTTTGTCTGATGCATAGTTTTGCAAATATTTTCTGCCATCCTGTGGATGA
 4123 CACACACACACACACACACACACACACATTTTTTAATGTTTGCAACTAAGACAAGAAA
 TITIAAAACAATCITGACAACTITGCAGAATAAATACAATCITGCATTCTGCTTTTTCACT
 CTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATA
 CCTGCATTAGAGGATGTTTGTTCATATTAAATAAAAAAACTCAGTTGGGCACAGTGACT
 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 irinotecan; colorectal cancer; cervical cancer; gastric cancer;
lung cancer; ovarian cancer; pancreatic cancer; malignant glioma;
multidrug resistance 1; MDR1; cytostatic; human; UGT1A1; MRP1; TOP1;
165473 TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT---
 related DNA sequence SEQ ID NO:660.
 23-JUL-2002; 2002WO-EP008220
 (first entry)
 standard; DNA;
 WO2003013535-A2
 04-DEC-2003
 Homo sapiens
 20-FEB-2003
 Human MDR1
 3823
 3883
 3943
 4003
 4363
 4483
 164777
 ADB92110
 165426
 165366
 4063
 4183
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165764 -----rrrrrrrrrgagarggagtcrrgcrgrrgcccaggcrgaggcarggcd 165714
 165533 CTGCCCGCCTCGGCCTCCCATAGTGCTGGGATTACAGGTGTGAGCCACCACCCCGGCCT 165474
 165839 -GTGATCCACCCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC 165781
 6
 3164 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCA 3223
 The invention relates ro a novel use of irinotecan or its derivative for the preparation of a pharmaceutical composition for treating colorectal, cervical, gastric, lung, ovarian or pancreatic cancer, or malignant glioma in a subject having a genome with a variant allele which comprises a multidrug resistance 1 (MDR1) polynucleotide. A composition of the invention has cytostatic activity. The present sequence is used in the exemplification of the invention.
 New use of irinotecan for preparation of pharmaceutical compositions for treating cancer in subject having genome with variant allele comprising multidrug resistance 1 polynucleotide.
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACCACGCCTGGCTAATTAAAAAAT
 166015 GGCGCAATCTTGGCTCACTGCAACCTCTGGGTTCAAGCAATTCTCTG-CCTCA
 CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 3104 ITTITITITITIGITGITGITTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGT
 Treactricitricitritricagardeactcreerigrerrecceaegeregagreere
 TITITIGIAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 Trrragradadargogorrrcacrorrrogreagecrogrerroaarrecroacere-
 ATTACTGCCTATTTTCTTCCTTTCTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC
 3523 TCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
 GCAGAGATGGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 TAGAGATGTGGGTTTCACCATGTTGGCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGAT
 Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;
 Gaps
 Length 177531;
 Query Match

8.0%; Score 400.4; DB 10; Length
Best Local Similarity 60.5%; Pred. No. 9.5e-64;
Matches 859; Conservative 1; Mismatches 477; Indels
 Disclosure; SEQ ID NO 660; 104pp; English.
 AĞ.
 EPIDAUROS BIOTECHNOLOGIE
 165780 CCGGCCTTTTTTTTT-----
2001EP-00117608
2002EP-00011710
 WPI; 2003-342400/32.
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ACTIGAACCCAGGAGGCAGAGGTIGCAGTGAGCCGAGATCGCATCATTGATTGCACTCTAGCCT 164778
 TTTGAGACCAGCCTGGCCAACATGGCAAAACCCCATCTTGTAAAACATACAAAAATTAG 164898
 165136 AGTACACACACACATCCACCTCTGTTACTCCCGTTACATCATAGTTTC-ATCTGATGAAC 165078
 165018
 CTGGGTGTGGTCATGCACGCCTGTAGTCTCAGCTACTTGAGAGGCTGAGGCAGGAAATC 164838
 GTCTTGCTCTTTTCGTCAGAAAATTCCAAAAGTTTGTTGTTTACATTCCTGTTGGCATCA 165137
 TAAACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCCAAAGTCAGGAG 164958
 4242
 4422
 4482
ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG 3822
 cytochrome P450; CYP3A5; variation; drug metabolism; cancer; treatment; immunosuppressant therapy; environmental carcinogen; mismatch; gene; ds.
 GAIGGGAITITITITITICITGACTIG------TIAGAGTIACTIGIAGATICT
 165077 ATTTTTATGACAGTTTATTTTTCCTTTATAAAGAACTGATGGGCCAGGCACGGTGGCT
 rigriggicarrigianarrarianingagacigiccarcirrigccracirrir
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTTGCTTATACATCCTCCTGCTCCA
 GGATATTAGTCCTTTGTCTGATGCATAGTTTGCAAATATTTTTCTGCCATCCTGTGGATGA
 CTGGGTGTAGTGGATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGATT
 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
 TTTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACT
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTTCAT
 CTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATA
 CACACACACACACACACTCACACACAGTTTTTTTTTAATGTTTTGCAACTAAGACAAGAAA
 CCTGCATTAGAGGATGTTTGTTCATATTAAATAAAAAAACTCAGTTGGGCACAGTGACT
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAAATACAAAATTAG
 |65473| TTTGACTTC----TTAATAATGGCCATTCTTGCAGGAGTAAGGCAGTACCT--
 GGGCGACAGAGCCCCATCTCAAAAAAAAAAAAAA 164738
 Human BAC clone GS1-259H13 CYP3A5 genomic DNA
 ВЪ
 ADH74617 standard; DNA; 177531
 (first entry)
 Homo sapiens
 25-MAR-2004
 3883
 3943
 4063
 4123
 4303
 4363
 4483
 3823
 4003
 165017
 164897
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 ADH74617;
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10-OCT-2001; 2001US-00974619.

US2003143537-A1

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The invention relates to a novel method for predicting the level and distribution of cytochrome P450 CYP3A5 expression in a subject. The method involves determining the nucleotide present in each CYP3A5 allele of the genomic DNA of the subject at the location(s) chosen from: a position corresponding to nucleotide 22893 of GenBank AC005020 within the genomic DNA of the subject at the location(s) chosen from: a position corresponding to nucleotide 30597 of GenBank AC005020 within exon 7 of the Cyp3A5 gene. The method is useful for identifying a subject having low or high drug metabolizing phenotype. The method is also useful for determining and assessing interpatient variation in drug metabolism and evaluating or determining appropriate drug therapy in patients undergoing cancer treatment or an immunosuppressant therapy. The methods are useful for diagnosing and assessing the ability of a subject to metabolize drugs that are metabolized by the CYP3A5 procein. The determination of CYP3A5 genotype, and thereby predicting the expression of CYP3A5 in organs or tissue, is useful in the determination of the individual predisposition to cancers, particularly those caused by environmental carcinogens. This polynucleotide sequence represents the human BAC clone GS1-259H13 CYP3A5 genomic DNA of the invention. This sequence is not shown in the specification. It has been taken from the GenBank database using the
 165956 GCCTCTGGAGTAGCTGATTACAGGGCACCCACCACCATGCCCAGCTAATTTTTGTA-- 165899
 165839 -GTGATCCACCCACCTCGGCTTCCCAAAGTTCTGGGATTACAGGCGTGAGCCACCTGCAC 165781
 ------TTTTTTTTGAGATGGAGTCTTGCTGTTGCCCAGGCTGGAGTGCAATGGCG 165714
 9
 3163
 3463 ATTACTGCCTATTTTCTTTCTTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC 3522
 3523 TCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT 3582
 by determining nucleotides present at position corresponding to nucleotide 22893 within intron 3 and/or nucleotide 30597 within exon 7 of
 Predicting level and distribution of CYP3A5 gene expression in a subject
 166015 GGCGCAATCTTGGCTCACTGCAACCTCTGCCTCTTGGGTTCAAGCAATTCTCTG-CCTCA
 GCCTCCCAAGTAGCTGGGACTAC-GAGCGTGCACCACGCCTGGCTAATTAAAAAAT
 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG
 CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG
 3104 TITITITITITIGETGTTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGT
 16075 TTGACTTCTTTGTTTTTTTGAGATGGAGTCTCGCTGTGTTGCCCAGGCTGGAGTGCAGT
 TTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 165898 TTTTTAGTAGAGATGGGGTTTCACTGTCTTGGTCAGGCTGGTCTTGAATTCCTGACCTC-
 Sequence 177531 BP; 51602 A; 39077 C; 38304 G; 48548 T; 0 U; 0 Other;
 3164 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCA
 Gaps
 Length 177531;
 8.0%; Score 400.4; DB 10; Length 60.5%; Pred. No. 9.5e-64; ive 1; Mismatches 477; Indels
 (SJUD-) ST JUDE CHILDREN'S RES HOSPITAL
 Claim 1; Page; 42pp; English.
 29-MAR-2001; 2001US-0279915P.
 CCGGCCTTTTTTTT----
 Matches 859; Conservative
 Zhang J,
 WPI; 2003-829781/77
 Local Similarity
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 CYP3A5
 3224
 3343
 Query Match
 3283
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Cytostatic; carcinoma; lymphoma; cancer; human;
 Human genomic sequence hCG37872
 28-FEB-2003; 2003WO-US006235.
 01-MAR-2002; 2002US-00087192
 (first entry)
 (SAGR-) SAGRES DISCOVERY
 WPI; 2003-328604/31.
 WO2003073826-A2.
 Homo sapiens
 18-NOV-2004
 Morris DW,
 3350
 3290
 Query Match
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 CTGCCCGCCTCGGCCTCCCATAGTGCTGGGATTACAGGTGTGAGCCACCACGCCCGGCCT 165474
 165136 AGTACACACACACCACCTCTGTTACTCCCGTTACATCATGTTTC-ATCTGATGAAC 165078
 165196 GTCTTGCTCTTTTCGTCAGAAATTCCAAAAGTTTGTTGTTTACATTCCTGTTGCATCA 165137
 165077 ATTTTTATGACAGTTTATTTTCCTTTATAAAAGAACTGATGGGCCAGGCACGGTGGCT 165018
 164837 ACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCATCATTGCACTCTAGCCT 164778
 165593 TAGAGATGTGGGTTTCACCATGTTGGCCAGGCTGGTTTCGAACTCCTGACCTCAGGTGAT 165534
 4242
 TTTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACT 3942
 TTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAATTAG 4362
 ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG 3822
165713 CAGTCTCGGCTCACTGCAACCTCAGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCT
 165653 CCTGAGTAGCTGGGATTACAGGCGCCCGCCACCATGCCCAGCTAATTTTTTAGATTTTTAG
 165306 GAIGGGAITITITITITICTICACTIG------TIAGAGTIACTICIAGATICT
 TTTGAGACCAGCCTGGCCAACATGGCAAAACCCCCATCTCTACTAAACATACAAAAATTAG
 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTGTATTTTTA
 CTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCG
 ricrregrearricrararararrrreagaaciererecardrearrieceracirrrr
 TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTCAT
 CTGGGTGTAGTGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGATT
 GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACTCCAGCCT
 165256 GGATATTAGTCCTTTGTCTGATGCATAGTTTGCAAATATTTTCTGCCATCCTGTGGATGA
 CTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCCCCAGAGAATA
 CACACACACACACACTCACACACACTTTTTTTTTAATGTTTGCAACTAAGAAAA
 4183 CCTGCATTAGAGGATGTTTGTTCATATTAATTAAAAATAACTCAGTTGGGCACAGTGACT
 3643 GCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGAT
 165473 Trigactic----traaraárgéccártctrecággagráaggcagraccr-----
 TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
 3763
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 CTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTGCGGCTAC 3409
 11;
 3410 TTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGGATTA--C 3467
 6050 ACCTITATACAATGIATAGAAATGIATAGGAGGCTITAGGIAAGAGACTGGCAATTAGIT 6109
 The present invention relates to novel DNA and protein sequences which are associated with carcinomas. The sequences are useful for: (i) for screening drug candidates; (ii) for screening of bioactive agent capable of binding to Carcinoma Associated Protein (CAP); (iii) for screening of a bioactive agent capable of modulating the activity of CAP; (iv) for diagnosing evaluating the effect of a candidate carcinoma drug; (v) for diagnosing carcinoma; (vi) for inhibiting the activity of CAP; (vii) for treating carcinoma; (vii) for neutralizing the effect of CAP; (ix) as a biochip; (x) for diagnosing carcinoma or a propensity to carcinoma; and (xi) for determining Carcinoma Associated (CA) gene copy number. In addition, the CA genes are useful as DNA vaccines and the CAP are useful as markers of sercinoma including lymphoma. The present sequence is one such CA coding sequence. Note: This patent is an equivalent to basic patent
Recombinant nucleic acid useful for diagnosis and treatment of carcinoma
 Other;
 TAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAATC
 5934 TAGAGACTGGGTTTCACT--GTTAGCCAGGATAGTCTCGATCCCCTGAC--CTTGTGATC
 TTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGTGGTGCAA
 5754 TTTTTTTTTTTTTTGAGACAGTCTCGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGGA
 5814 TCTTGGCTCACTGCAAGCTCTGCCTCCTGGGTTCACGCCATTCTCCTGTGCTCAGCCTCC
 CAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAATTTTTTG
 5874 cgagraderiogeacracogereceeeceacearecereeeraarrrrrregrafirra
 3171 CCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGA-TCTGCTGACCTCAGCGTCC
 Gaps
 Sequence 87687 BP; 23583 A; 17049 C; 18231 G; 28170 T; 0 U; 654
 85;
 8.0%; Score 399; DB 11; Length 8 60.1%; Pred. No. 1.6e-63; ive 1; Mismatches 511; Indels
 Claim 1; SEQ ID NO 1978; Opp; English.
 comprises a nucleotide sequence
 Matches 900; Conservative
 Local Similarity
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standard; DNA; 87687 BP

ACN45166 ACN45166

RESULT 45 ACN45166 ID ACN4 XX AC ACN4

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This invention describes a novel method of predicting or determining whether a mammal will respond or is responding to an anti-cancer agent that modulates cyclin-dependent kinase (cdk) activity. The method comprises measuring the level of one or more biomarkers selected from 2774 biomarkers given in the specification (nucleotide sequence SEQ ID NO:1246 (Genbank EST M28729) is especially preferred). The method of the invention is utilized in a kit for determining or predicting whether patient would be susceptible or resistant to treatment by an agent modulating cdk activity. The invention also describes a method for utilizing individualized genetic profiles for treating diseases and disorders based on patient's response and molecular level, specialized microarrays comprising the biomarkers described, antibodies directed disorders blomarkers and a cell culture model to identify biomarkers. The cdk modulator is preferably N-5-[[6.1,1-binethylethyl].2- oxazolyl]methyllthol-2-thiazolyl-4-piperidine carboxamide, 0.5-L-cartaric acid salt. Note: The sequence data for this patent did not form the the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.inft/pub/published pot sequences. This sequence encodes a biomarker used in the method of the invention.
 95961 IGGIGGAATCTIGGCTCACCGCAACCTCCGCCTTCTCAGTTCAAGCAACTCTCCTGCCTC 96020
 TGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTC 3222
 Biomarkers useful for predicting or determining the response of a mammal to a cancer treatment comprising administration of a modulator of cyclin-
3104 ITITITITITIGITGITIAGAGACAGGGICTIGCIC-IGICACCCAGGCATGAGCACAG
 Sequence 131078 BP; 38261 A; 27996 C; 27306 G; 37512 T; 0 U; 3 Other;
 Gaps
 Cyclin-dependent kinase modulation biomarker DNA SEQ ID NO 1476.
 47;
 Score 399; DB 14; Length 131078;
Pred. No. 1.7e-63;
1; Mismatches 541; Indels 47;
 cytostatic; cyclin-dependent kinase; cdk; biomarker; gene; ds
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 Wong
 Li M, Rupnow BA, Webster KR, Jackson DG,
 Claim 5; SEQ ID NO 1476; 141pp; English
 ВР
 (BRIM) BRISTOL-MYERS SQUIBB CO
 ADX06911 standard; DNA; 131078
 8.0%;
 29-JUL-2004; 2004WO-US024424.
 2003US-0490890P.
 to a cancer treatment com
dependent kinase activity
 Best Local Similarity 60.7
Matches 910; Conservative
 WPI; 2005-163068/17.
P-PSDB; ADX06912.
 (first
 WO2005012875-A2.
 Homo sapiens.
 29-JUL-2003;
 21-APR-2005
 10-FEB-2005,
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 ADX06911;
 Query Match
 ADX0691
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 CCAGGTGATCTGCCCACCTCAGCCACCCAAAGTGCTGGGATTACAGGCGTGAGCCACCAC 6409
 6470 TCTGGCTTCAAAAAGATGAATGAAATCAATGGTAAAAATTTGTTTAACGTGCTCGTTTC 6529
 AAACTITICITITICITITIAAAACAATCITGACAA------CTITGCAGAAT 3912
 AGCAGCACATACACTAAAATTAGACTGATACAGAGAAGATTAGCATGGCCCCTGCGCAAA 6589
 AAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATGACTTTTTTCATATTGC 3972
 6590 GATGACACGCAAATTTCATTTTAAAAAGCAAATAAATTTTGTTTAAAAATCATTTTTA 6649
 CTCAAACCTTTATTGTTACTGTTTTTTTCATTGTTACTATTTTTAGTCACTGAATAATATGG 4032
 CTTAATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCCAAATTTACAAATCTGATG 4092
 ATAATAGGGCTGTCCTTATATACTTTCAGTTTTCAGGAATGATAATTCTGAAGAAAAAGT 6769
 6889
 6890 AGCCAGACACATTAATTTCCAAGGCTCATTGGCTGCTAAGAAAATTGTCACTGTGGCCA 6949
 GCCACAGTGGCTCATGCCTATAACCCCAGCACTTTGGGAGGCCAAGGCGGGCAGATCACC 7009
 TGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTAC-TAAAA 4349
 ATACAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTG 4409
 ATACCAAAATTAGCTGGGTGTGGCGCCCCACCTGTAGTCCCAACTACTCAGGGGGCTA 7129
 AGGTGGGAGGACTGCCCAGAGCCTAGGAGGTGGAGGTTGCAGTGAGCTGAGACTGCACCAC 7189
 6169
 GTATTTTTAGCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACC 3693
 3694 TCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGT 3753
 GCAGTGTCTGACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGGCCTAGATAT 3864
 |||||
TGAGCCCAGGAGTTTGAGATCAGCCTGGGCAACATGGCAAAAACCCCGTCTCTACGAAAAA
 AGGCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCAC
 GCCTGGCCGATTACTGTCTATTTTCTTT-----ATTGCTATATCCCCAGATCTAGA
 6410 ACATGGCCTAAAAATTGTTCTTCTTATTTGAAAATGAGTTTATGAGGACATTTTGTCAA
 TGCCTATTTTCTTTCTTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACCTCCGT
 TCA-------GCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTG
 CCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCCACCACCATGCTTGGCTAATTTTTT
 -----CACACACACTCACACACACACACAGTTTTTTTAATGTTTGCAACT
 5110 TTTTTAAATTGTTACTTTTTTTTTGAGACAGACTCTCACTCTGTGTCCCGGACTGGAGT
 AAAGCTATGAACCCTCTCCCCAGAGAAATACACACA---
 6350
 4410
 3528
 3574
 6230
 6290
 3754
 3805
 3865
 6530
 3913
 3973
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 4093
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are associated with carcinomas. The sequences are useful for: (i) for screening drug candidates; (ii) for screening of bioactive agent capable of bioactive agent capable of a modulating the activity of CAP; (iii) for screening of a bioactive agent capable of modulating the activity of CAP; (iv) for evaluating the effect of a candidate carcinoma drug; (v) for diagnosing carcinoma; (vii) for inhibiting the activity of CAP; (vii) for treating carcinoma; (viii) for neutralizing the activity of CAP; (ix) as a biochip; (x) for diagnosing carcinoma or a propensity to carcinoma; and (xi) for determining Carcinoma Associated (CA) gene copy number In addition, the CA genes are useful as MA vaccines and the CAP are useful as markers of carcinoma including lymphoma. The present sequence is one such CA coding sequence. Note: This patent is an equivalent to basic patent
 Sequence 174448 BP; 43106 A; 40529 C; 40481 G; 47948 T; 0 U; 2384 Other;
 present invention relates to novel DNA and protein sequences which
 97088 TAGGCAGGCAGATCAC--GAGGTCAGGAGATCGAGACCATCCTGGCTAACACGGTGAAAC
 GAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACACAGAGACTCTATCTCAAAA
 4393 AGCTACTCGGGAGGCTGAGGCAAGAGAATTG-CTTGAACCTGGGAGGCAGAGGTTGCAGT
 AAATAAATAAATAAAATAAAGGATCGGAGAGAAACAAAACTAATAAGATTCCTGAAGGT
 DB 11; Length 174448;
 Recombinant nucleic acid useful for diagnosis and treatment of comprises a nucleotide sequence.
 0; Mismatches 524; Indels
 Cytostatic; carcinoma; lymphoma; cancer; human; gene; ss
Query Match

8.0%; Score 398.6; DB

Best Local Similarity 59.8%; Pred. No. 2e-63;

Matches 879; Conservative 0; Mismatches 5;
 Claim 1; SEQ ID NO 148; Opp; English.
 ВР
 Human genomic sequence hCG21793
 ACN43946 standard; DNA; 174448
 01-MAR-2002; 2002US-00087192.
 2003WO-US006235
 (first entry)
 (SAGR-) SAGRES DISCOVERY
 WPI; 2003-328604/31.
 WO2003073826-A2.
 28-FEB-2003;
 Homo sapiens
 18-NOV-2004
 12-SEP-2003
 Morris DW;
 4512
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ACN43946
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 96254 TATTTTTTTTTTTTGAGATGGAGTTTTGCTCTTATTGCCCAGGCTGGAGTGCAATGAGG 96313
 96373
 96490
 96491 TCCGCCTGCCTCCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCCGTGCCGGCC 96550
 96727
 96728 TCTGGCTTCAATGCTTTCTATCTTTCCCTACATGTATACTAGCTTGCAGTGCTTCCCAC 96787
 96788 TTCATTACTAATCTACCCTAACAGACCGTAAGATGTATTGAAAGATTTGTTACTAATGA 96847
 96848 GTATCAAAGTTATAACCTATTTTATGTTATTTCAACAACATTATTCTTAGTCATTTGCAT 96907
 96968 AACCACGTGGCTTCAGTAGAACAAAGGTTAAGAATTGTTAGCTTAAGGCAATGACGTATT 97027
 97028 AAAAACACTTAAGGCCAGGTGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCC 97087
 96197 CAG---CTGATTTTTCTTTCAGTATGTCCAATGATGTTCCTGAGCCCGCTTATACCT 96253
 3701
 96908 TCTGCTTAGATTTCTAAGACAAAAGATAGAGGTTAAAAGCTAGAAGCTCAGAGCCTATCTC 96967
 4273
 3343 AGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTG 3402
 CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG 3462
 3463 ATTACTGCCTATTTTCTTCCTTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACC 3522
 3761
 TCACTTATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTACTGTTTT 3997
 4274 AAGGTGGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAAC 4333
 96021 AGCCTCCCAAGTAGCTGGGATTAC-AGCATGCCCCCCCATGCCCGGCTAGTTTTGTA---
 3762 GATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATA
 96077 TTTTTAGTAGAGACAGGTTTCTCCATGTTGGTCAGGCTGATCTGGAACTCCCGACTTCA
 CCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTT-TTGTATTTTT
 AGCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGA
 TCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCC
 96551 TATACCT---TATTTTCATCAAATAAAATATATGACCTTAAACTACCTGTGTCATACTTA
 3882 TTTTA----AAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTT
 TTCATTGTTACTATTTTAGTCACTGA--ATAATATGGCTTAATTTGCTTATACATCCTCC
 4056 TGCTCCACTTTAGAA--------GGCCAAATTTACAAATCTGATGAAAGC
 AATAACTCAGTTGGGCA----CAGTGACTCAAGCCTGTAACCACAGTACTTTGGAAGTCC
 TTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCA
 TCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCT
 96668 ATTAATACTAAAACATTTGTTTTTCTTGTCAGATCTAGCCCAAATGTCCTCTGTCTCT
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Gaps

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Human; oxidoreductase enzyme; transferase; hydrolase; lsomerase; ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; inflammatory disorder; inflammatory alsorder; inflammatory alsorder; anticoagulant; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant; ds.
 CCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAG
 ATATTAATAAAATA----ACTCAGTTGGGCACAGTGACTCAAGCCTGTAACCACGTA
 <u> acaagtrgraaaataggarccgrggccgggcacacacacacacacrrgraarrccagca</u>
 ATATGGTGAAACCCTATCTCTACTAAAAATACAAAATTAGCTGGGTGTAGTGATGCATG
 AGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACAGCGAGACTC
 CTTTGGAAGTCCAAGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCA
 Genomic sequence #503 encoding novel human enzyme polypeptide
 56596 CATCTCAAAATAAATAAAAAAAAAA 56624
 ВР
 2000US-0179065P

2000US-0180628P

2000US-0180454P

2000US-018974P

2000US-0199074P

2000US-0190076P

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2000US-025515P

2000US-020467P

2000US-0217487P

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2000US-0217487P
 6131
 (first entry)
 AAS42187 standard; DNA;
 WO200155301-A2
 31-JAN-2000;
04-FEB-2000;
02-MAR-2000;
16-MAR-2000;
11-MAR-2000;
11-MAR-2000;
11-MAY-2000;
07-JUN-2000;
28-JUN-2000;
30-JUN-2000;
 26-JUL-2000;
26-JUL-2000;
14-AUG-2000;
 07-JUL-2000;
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11-JUL-2000;
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 11-JUL-2000;
 17-DEC-2001
 02-AUG-2001
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 ACATGGCGAGGGAGCTGAGAGTGTCAGCTCAGGTCTCTTCTTCTTTTATAAACCAC 55937
 CAGTCCCACTCCTATGATAAACCATTAATCCATGAATGGATTAATCCACTTATGAGGACA 55997
 56058 ATTTCAACATGAGTTTTTGGAGGGGACAAATATTCAAATCATACTATTATGTTACCAGTAA 56117
 TGTGCTAAGTGTTTTATATCTATTATTTTAATTTTCTTGGTCACTGCATGACATAT 56237
 3400
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 AATATGGCTTAATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAA 4085
 TCAGCGGTCCCAAGTAGCTGGGATTACAGACGTGTGCCACCACAACCGGCTCATT--TTTG
 ccc A GCCTTCTTCTTCTTCTTCTTCTCCTCC -------TCCTCCTCCTC
 TGGTAGAAACGGGGTCTCGCCACGTTGGCCTAGTTTAGTCTCAAACTCCTCACCTCAAGTG
 ATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGC
 CGATTACTGTCTATTTTCTTTATTGCTA-----TATCCCCAGATCTAGAGCAGTGTCTG
 cascccititiaarcaccictgaaassccccaccictcaatscrsccacatgassaarrac
 GGGATCTCTTTTTTTTTTTTTGAGATGGAATCTCACTCTGTAGCCCAGGCTGGAGTGC
 AGTGGTGTGATCTCGGCTCACTGCAACCTCCGCCTCTCAGGTTCAAGCGATTCTCCTGCC
 CAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATG
 TGCGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAG
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 TAGCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTG
 CTGGTGAAGACCTTCTTGCCGGTGGGGACTCTGCAGAGTCCTGACAGGGAGCAGGGCATC
 ACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATA-----AA
 GGGTTTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCAC
 TCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAA
 ATTITITITITICIAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTT
 GGATTACTGCCTATTTTCTTCCTTTCTTTTTTGAGACAGAGTCTCACTTCATCACCTCAA
 CCTCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGC
 CTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTT
 ------AACCTTTATTGTTACTGTTTTTTCATTGTTACTATTTTAGTCACTGAAT
 AATTTAAAATATAGGAATAATAATTGCCGATGTGGCAGACTTACCAAATACTAGACCC
 TTCTGCTTTTTCACTTATCACCTTGTTATGACTTTTTCATATTGCCTCA-----
 55878
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14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-022526BP.
14-AUG-2000; 2000US-022526BP.
14-AUG-2000; 2000US-022526BP.
14-AUG-2000; 2000US-022526BP.
14-AUG-2000; 2000US-0225274P.
14-AUG-2000; 2000US-0225274P.
14-AUG-2000; 2000US-022574P.
14-AUG-2000; 2000US-022574P.
14-AUG-2000; 2000US-022577P.
14-AUG-2000; 2000US-022577P.
14-AUG-2000; 2000US-022577P.
14-AUG-2000; 2000US-022577P.
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14-AUG-2000; 2000US-02297P.
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14-SEP-2000; 2000US-023196P.
14-SEP-2000; 2000US-023196P.
14-SEP-2000
 2000US-0246475P
2000US-0246476P
2000US-0246477P
 08-NOV-2000;
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(HUMA-) HUMAN GENOME

Barash SC, Ruben SM; Rosen CA,

WPI; 2001-465566/50

Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous diseases.

Disclosure; SEQ ID NO 2313; 1180pp; English.

The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, isomerases or lygase. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of a wide range of disorders including hyperproliferative disorders (e.g. cancer), immunodeficiency disorders (e.g. Lathritis), neurological disorders (e.g. Alba) autcoimmune disorders (e.g. arthritis), neurological disorders (e.g. Alba) autcoimmune disorders (e.g. asthma), cardiovascular disorders (e.g. athritis), reproductive disorders (e.g. infertility) and infectious disorders (e.g. influenza). The polymucleotides of the infectious disorders (e.g. Influenza). The polymucleotides of the infections and sho be used in gene therapy. Assistings Assisting represent DNA sequences encoding for the novel human enzyme polypeptides of the invention. Note: The sequence data for this patent did not form part of

Page 82

2013 CCGTTCAGCTCACTACCTGCCTCCCGGG 3556 TCCTGACCTCAAGTGATCTGCCTGCCTCAGTCT 3718 2350 CTCTTGACTTTGTTTCCCAAAATCTTGTTATGG 2442 2682 4238 2742 SCCTCCCAAGTAGCTGGGACTACGAGCGTGCAC 3256 SCAATCCTCCTACCTTGGCATCCCAAAGTGCTG 3376 3GCTACTTATTTCTTTACATTCCATCTTTCCAA 3436 rescricciccacarratratrat---- 1980 rracrecratriricriccritririrgaga 3496 CTGAGTAGCTGGAATTACAAGGGTGCACCACCA 3616 STCACTGTGCCTGGCCGATTACTGTCTATTTTC 3778 CAGTGTCTGACATATAGTAGGTGCTCAATAAAT 3838 AACTITCITITICITITITAAAACAAICTIGA 3898 saaggggririgcricccaaaaggccrirgr 2390 CATTCTGCTTTTCACTTATCACCTTGTTATGA 3958 IGTTACTGTTTTTCATTGTTACTATTTTAGTC 4018 rcagcagcrerieggaakgcegeggegrerrerere 2502 PACATCCTCCTGCTCCACTTTAGAAGGCCAAAT 4078 sescriseriesescicecia cacacaracida as sa ----CCCTCTCCCCAGAGAATACACACACACA 4132 AAAGCTGACCCCAGAGAGCCAGGCCATAGCAGG 2622 ATGITIGCAACTAAGACAAGAAACCTGCATTAG 4192 GGAAGTCCAAGGTGGGTGGATCACTTGAGGTGA 4298 cicggagaaaagargcagaaattcacacatgag ccreacrererandare------TA-----ACTCAGTTGGGCACAGT AATAAAGAAGGGGCCGGGCACGGCGCGCT rrrrrgragagacregercrracracerrege

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 17-JAN-2001; 2001WO-US001354
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 AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) and a be used in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polyuncleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally. (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the cancers and cancer metastases of haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54922 to AAK54950 and AAM82169 represent sequences used in the exemplification of the present invention
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 acids encoding human immune/hematopoietic antigen polypeptides, for preventing, diagnosing and/or treating cancers and metastasis.
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Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
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cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
 Stomach cancer related gene sequence SEQ ID NO:2740
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DT 15-MAY-2002 (first entry)

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WHUMAN; cancer; colon; breast; oval

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 CCCAAAGTGCTGGGATTACAGGCATGAGCCACTGTGCCCGGCCTCCCCACATTTTTAAG 2311
 TTTATTGCTATATCCCCCAGATCTAGAGCAGTGTCTGACATATAGTAGTGGTGCTCAATAAAT 3838
 3899 CAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATGA 3958
 2391 TTAGGGCCCAG-----CACCCTCACTCTTGACTTTGTTTCCCAAAATCTTGTTATGG 2442
 4019 ACTGAATAATATGGCTTAATTTGCTTATACATCCTGCTGCTCCACTTTAGAAGGCCAAAT 4078
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 2623 Gecreaggargecregreanggargecreggagaaaagargecagaarrcacacargag 2682
 GAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAAA 4358
 2443 AGCTGTGCGTCCGGCAGTCCTCGGGAATCAGCAGCTGTGGGAAGCGGGGGGGTGTTGTGTC 2502
 2563 TTCCTCAGCAGAAGGCAGGCAGGGAACAAAGCTGACCCCAGAGAGCCAGGCCATAGCAGG 2622
 2014 ATCGCCCAGGCTGGAGTGCAGTGGCACATCTCAGCTCACTGCAAGCTCCGCCTCCCGGG
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 TGCTTGGCTAATTTTTTGTA-------TTTTTAGCAGAGGTTGGGTTTT
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 TCCATGG------CCCAGATCTTCCTCCTGACTCTCCTGTGATC-----
 TTACAAATCTGATGAAGCTATGAA-----CCCTCTCCCCAGAGAAATACACACACACACACA
 4133 CACACACTCACACACAGTTTTTTTTAATGTTTGCAACTAAGACAAGAAACCTGCATTAG
 4193 AGGATGTTTGTTCATATTAATTAAAAATA------ACTCAGTTGGGCACAGT
 GGAGTTCGAGACCAGCCTGGCTAACATGATGAAACCCAGTCTCTACTAAAAATACAAAGA
 TTAGCTGGGGGTGTAGTGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAG
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147115 TGTGTTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCCAGGCTGGTCTTGAACTCCTGAC 147056
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 ATGCTGCTTTCCACTGGCACCACTTTGTGAGGAAAAGGGAACCCTAGAAAAATAACATTG
 146816 TGGGCATGATTTCTTTATCGTACGGTGAATTCAGCCTTGCAGTGATTTTTTCAGAGATGA
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 146458 CAGTTTGGGAGGCCAAGGTGGGTGGATCACGTGAGGTCAGGAGATCGAGACCATCCTGGC
 146398 TAACATGGTGAAACCCTGTCTTACTAAAATTACAAAAAATTAGCCGGGCATGGTGGTGGTG
 146936 AAACTCACCCCATGTTAATGCATCAGTCACTAAACTAGGATAAAGGTAGGAGTACTGAA
 ----CAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATGACTTTTTCATATTGCC
 TCAAACCTTTATTGTTACTGTTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGC
 rcccrraag - ragcaaagagaagargaagacrracraagrargaarrargaraacrgrr
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 4378 CATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAG
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 Thyroid cancer related gene sequence SEQ ID NO:5576.
 standard; DNA; 167343
 146218 ACTCCTTCTC 146209
 (first entry)
 4498 ACTCTATCTC 4507
 15-MAY-2002
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 147234 recreeceaacerereadarrregedaacererecereadricaacearrerer 147175
 CTTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACC 3397
 The present invention describes a method (M1) for screening for an anti-
neoplastic agent. The method involves exposing cells to a chemical agent
to be tested for anti-neoplastic activity, determining a change in
expression of at least one gene (I) of a signature gene set, where (I)
comprises a sequence (S) selected from 847 sequences (given in ABL61664
to ABL70110), or is at least 95% identical to (S), where a change in
expression is indicative of anti-neoplastic activity. (I) has cytostatic
activity and can be used in gene therapy. M1 can be used for screening an
anti-neoplastic agent, and can be used for producing a product which is
the data collected with respect to the anti-neoplastic agent as a result
 of Mi, and the data is sufficient to convey the chemical structure and/or properties of the agent. MI can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarcinoma, carcinoma, class cell carcinoma, carcinoma, cell carcinoma, neuroendocrine carcinoma, popular cancer, squamous cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
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a change
 change
 Sequence 167343 BP; 49550 A; 37098 C; 35753 G; 44929 T; 0 U; 13 Other;
 CACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGGATCTGCTG
 GCCTCTGCCTCGCCAGTAGTTGGGATTACAGGTGTGTGCTACCACGCCCAGCTAATTTTT
 Trititititaatitaatitaitititigaakkakkastrititiskikatikakka
 ACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAA
 TTTGGGTTTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAG
 AAAATTTTTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGG
 CCTCAGGTGATATGCCCACCTTGGCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACT
 Grécordécorativitativitatoritatoritativas
 147294 GACCGACTCTCTCTGTTGCCTAGGCTGGAGTGCAGTGTCACGATCTCTGCTCACTTCTC
 TGTATTTTTAGCAGAGAGGGGTTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGAC
 ATGTGCGG-CTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGA
 TCAACC----TCCGTTCAGCTCACTGCAACCTCTGCCTCCGGGTTCAAGYGATTCTCCT
Horrigan
 g cells to a determining
 DB 6; Length 167343;
Endress G,
 Indels
 for anti-neoplastic agent involves exposing
 agent to be tested for anti-neoplastic activity, and in expression of a gene of a signature gene set.
 Score 398.4; DB 6;
Pred. No. 2.2e-63;
1; Mismatches 532;
Ebner R,
 Claim 1; SEQ ID NO 2740; 44pp; English
Carter KC,
 8.0%;
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Conservative
 WPI; 2002-188264/24
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comprises a sequence (S) selected from 8447 sequences (given in ABL61664 to ABL70110), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity. (I) has cytostatic activity and can be used in gene therapy. M1 can be used for screening an anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as a result of M1, and the data is sufficient to convey the chemical structure and/or properties of the agent. M1 can be used in the treatment of cancer such as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarcinoma, calcinoma, clear cell cancer, infiltrating ductal cancer, infiltrating ductal cancer, infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's

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Page

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chemical
a change
Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
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 Ebner R,
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 Carter KC,
 26-SEP-2000; 2000US-0235039P.
27-SEP-2000; 2000US-023511P.
27-SEP-2000; 2000US-0235711P.
27-SEP-2000; 2000US-0235840P.
28-SEP-2000; 2000US-0235603P.
28-SEP-2000; 2000US-0236033P.
28-SEP-2000; 2000US-0236033P.
28-SEP-2000; 2000US-0236034P.
28-SEP-2000; 2000US-0236034P.
 2000US-0234923P.
2000US-0234924P.
2000US-0235077P.
2000US-0235082P.
 2000US-0236111P.
2000US-0236842P.
2000US-0236891P.
2000US-0237172P.
 2000US-0234052P.
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2000US-0234567P.
 2000US-0235280P.
 2000US-0237173P.
2000US-0237278P.
 2000US-0233617P
2000US-0234009P
 2001WO-US010838
 2000US-0234034P
 2000US-0237295P
 2000US-0244867P
 Augustus M,
 Weaver Z;
 (AVAL-) AVALON PHARM
 WPI; 2002-188264/24.
 WO200194629-A2
 28-SEP-2000; 28-SEP-2000; 29-SEP-2000; 2
 02-0CT-2000; 2
02-0CT-2000; 2
03-0CT-2000; 2
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 18-SEP-2000;
20-SEP-2000;
20-SEP-2000;
20-SEP-2000;
 25-SEP-2000; 25-SEP-2000; 25-SEP-2000; 25-SEP-2000; 25-SEP-2000;
 25-SEP-2000; 25-SEP-2000; 26-SEP-2000;
 02-OCT-2000; 202-OCT-2000; 202
 30-MAY-2001;
 05-JUN-2000;
05-JUN-2000;
18-SEP-2000;
 -2000;
 29-SEP-2000;
 Homo sapiens
 22-SEP-2000
22-SEP-2000
 03-OCT-2000
01-NOV-2000
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147415 147355 147295 147235 GCTTCAACCTCGGAGTAGGTGAGTTACAGGTGTGTGCCACCATGCCTGGCTAA-TTTT 147116 147533 GCCTCTGCCTCGCCAGTAGTTGGGATTACAGGTGTGCTACCACGCCCAGCTAATTTT 147474 147175 147056 146877 147653 TTTTTTTTTTAATTAATTTATTTTTTTGAGACGGAGTCTTGCTCTGTCACCTAGGCTGGAG 147594 147593 TGCAGTGGCACAATCTTGGCTCACTGCAGCCTCCGCCTCCCGGTTGAAGCGATTCTCCT 147534 146997 3572 3277 3456 3516 3692 11; 3157 3217 3337 CTTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACC 3397 3752 3800 Sequence 167343 BP; 49550 A; 37098 C; 35753 G; 44929 T; 0 U; 13 Other; AAAATTTTTTTTTTTTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGG CCTCAGGTGATATGCCCACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACT TITGGGTTTTTTTTTTGTTGTTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAG 3158 CACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTG ACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAA ATGTGCGG-CTACTTACTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGA 3457 ACAGGGATTACTGCCTATTTTTTTCTTCTTTTTTGAGACAGAGTCTCACTTCATCACC 147294 GACCGACTCTCTCTCTGTTGCCTAGGCTGGAGTGCAGTGTCACGATCTCTGCTCACTCTC TGTATTTTTAGCAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGAC CTCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTG TGCCTGGCCGA-----TTACTGTCTATTTTCTTTATTGCTATATCCCCAGATC récecadecearactronariantes de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de la recensión de l 146936 AAACTCACCCCATGTTAATGCATCAGTCACTAAACTAGGATAAAGGTAGGAGTTACTGAA TCAACC----TCCGTTCAGCTCACTGCAACCTCCCCGGGTTCAAGYGATTCTCCT GCCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTT Gaps Length 167343; 45; Indels ; 9 Score 398.4; DB 6; Pred. No. 2.2e-63; 1; Mismatches 532; 8.0%; ilarity 60.1%; Conservative al Similarity 872; Conser 3278 147414 3573 3633 3693 Query Match 3098 3218 3338 3398 3517 147174 147115 147055 3753 146996 3801 Local tches 8 셤 ò 셤 ò g ò g ò 8 ò g ò В ò g ò g ò 셤 ò g › 원 ò g ò

The present invention describes a method (M1) for screening for an anti-neoplastic agent. The method involves exposing cells to a chemical agent to be rested for anti-neoplastic activity, determining a change in expression of at least one gene (I) of a signature gene set, where (I)

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Claim 1; SEQ ID NO 5576; 44pp;

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The invention relates to detecting (MI) granulocyte (GC) activation (GCA), by detecting the level of expression of gene(s) (Gs) identified by CCA (GCA), by detecting the level of expression of gaiven in the specification, and comparing the expression level to an expression level in an unactivated GC, where differential expression of Gs is indicative of GCA. Also included are complainty (M2) GA by contexting GC with an agent that a lerers the cypression of at least one gene in GS; (2) screening (M3) for an agent capable of modulating GCA or an inflammation (especially chronic) in a tissue, an allergic response in a subject, exposure of a subject to a pathogen or sterile inflammatory disease using the gene expression or profile; (3) detecting (M4) an inflammation (especially chronic) in a tissue, an allergic response in a subject, exposure of subject to a pathogen or sterile inflammation (especially chronic) in a tissue of the tissue of gene(s) from GS, where the level of expression in a sample of the tissue of gene(s) from GS, where the level of expression in a subject, exposure of a subject to a pathogen or sterile inflammation (especially chronic) or in a tissue, an allergic response in a subject, exposure of subject to a pathogen or sterile inflammation in a tissue; M4 is useful for modulating GA, M3 is useful for subject to a pathogen or sterile inflammation (especially chronic) in a tissue, M4 is useful for modulating GA, M3 is useful for exposure of a subject to a pathogen or sterile inflammatory disease (e.g. exposure of a subject to a pathogen or sterile inflammatory disease (e.g. exposure of a subject to a pathogen or sterile inflammatory disease, ulcertision injury, renal respection injury, howel disease, conting a pathogen or sterile disease, ulcertision injury, renal respection injury, and paraginatory bowel disease, ulcerting in dispute in a pathogen or sterile disease, ulcertision injury, and paraginatory bowel disease, ulcerting inflammatory distress syndrome, inflammatory bowel disease, ulcerting
 130998 ridiciadiscricia de cara de contra de c
 130818 TTTTAGGCCAGGCACGGTGGCTTATGCCTGTAATCCTAGGACTTTGGGAGGCTGAGGCGG 130877
 130878 GCGGGTCACTTGTGGTCAGGAGTTTGAGACCAGCCTGACTAACATGGTGAAACCTCGTCT 130937
 130938 CTACTGAAAATACAGAAATTAGCCAGGGTGCTGGCGGCGTCTGTAATCCCAGCTACT 130997
 Detecting granulocyte activation by detecting differential expression of genes associated with granulocyte activation, which serves as diagnostic markers that is useful for monitoring disease states and drug toxicity.
 infection, viral infection, parasitic infection, protozoal infection, fungal infection and Ms is useful for treating one of the above conditions. The present sequence represents a gene differentially expressed in granulocytes. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at the wipp.int/pub/published_pct_sequences
 2287 ITTCAGGCCAGGCGCGGTGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGG
 CTACTAAAAAATACAAAATTAGCCGGACATGGTGGCGAGCGCCTGTAACCCCCAGCTACT
 Sequence 201143 BP; 50606 A; 49308 C; 49683 G; 51546 T; 0 U; 0 Other;
 Query Match 8.0%; Score 398.4; DB 6; Length 201143; Best Local Similarity 54.0%; Pred. No. 2.3e-63; Matches 1259; Conservative 3; Mismatches 894; Indels 176; Gaps
 GCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCT
 Vockley J;
 TGGGAGACTGAGTTGGAGGTTTCAGTGAGCCAAG-----
 Yamaga S,
 Claim 1; SEQ ID NO 139; 114pp; English
 SM,
 03-OCT-2001; 2001WO-US030821.
 03-OCT-2000; 2000US-0237189P
 Beazer-Barclay Y, Weissman
 WPI; 2002-435328/46
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146518 TGCTTTCCTTAGAATATGGTTTTCTGGCCAGGAGCGTTTGGTGCACGCCCTGTAATCCCAG 146459
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 146756 ACAGAATTTAAAGTGTTAAGAACTCATTTGGGAGGCTAAGGCAGGTAAAGTGCTTGAGCCC 146697
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 CAATATGGTGAAACCCTATCTCTACTAAAAATAC--AAAAATTAGCTGGGTGTAGTGATG
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 3974 TCAAACCTTTATTGTTACTGTTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGC
 TTAATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGA
 viral infection; parasitic infection; protozoal infection; fungal infection; storile inflammatory disease; psoriasis; rheumatoid arthritis; glomerulonephritis; asthma; thrombosis; cardiac reperfusion injury; renal reperfusion injury; ARDS; adult respiratory distress syndrome; inflammatory bowel disease; Crohn's disease; ulcerative colitis; periodontal disease; granulocyte activation; chronic inflammation; allergy.
 Human DNA differentially expressed in granulocytic cells #139.
 Human; ds; granulocytic cell; DNA chip; bacterial infection;
 ВР
 ABK83568 standard; DNA; 201143
 ACTCCTTCTC 146209
 (first entry)
 ACTCTATCTC 4507
 WO200228999-A2
 11-APR-2002.,
 Homo sapiens
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13215 CGTAGCTGGGATTACAGGCACCCACCACACCTGGCTAACTTTGTTA-TTTGTAGTG 13273
 AATGTGGGGGGGGGCGAGAGCATTCCCCAAAGGTGTTCAGGCACCAGTCTCTTTT 12795
 reactriticantratriciacionecieretricecricacagarierricereficite 12855
 crcascricaciacaaccriccaccriccasscricaascearrerecrecerscricascere 13214
 (3394 GGTCTATTTĊTÁTTGÁTTGTTGTTTTCTĊĊCTĊŤTGATTATGGGTCACATTTGCCTGCTT 13453
 TTAATTTTCTTGGTTCTGGGCAGTGTCTCCTTTAATCCTCAGAACAACACTATGGGATAG 3006
 TGTTGTTGTTGTGTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGTGGTGCAAC
 ACCTGTTCCTGAGAGTGGGCTGAGGCCTGACCTATTGCTCTGCACTTACTCCTATCT
 CAGCTGTCCCTCCCACTTTCCAGGTGCTGCCAGACACATGACAACTGCTAYGACCAGGCC
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 TCATCACCTCAACCTCCGTTCA-------GCTCACTGCAACCTCTCCCC
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 12497 AAAAAAAAAAAGGGACTATGTATGAAATACCCAGGACAGTGCCCTTCCCTTACCCATCAT
 12557 GACCCCCACACCCACAGTGTGGCCATCCTGCTCTACCTGACGCGCAAATATAAAGGTCCCT
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 TTCTAGTTGGTTCTCAGTAGGCCGGGGGAAATAATAGTAACAACAACAGCCATGATTTAGTG
 12916 CTGGAAATTCCATTTGGTTGTTTTTTAGAATTTCCACTTCTCTGATGAAATTCACCATCT
 GIICAICCAITTIAICIGICITITICITIGIAAATICITITAACATAITTAICACIGITACCI
 CATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGCCTCCCA
 GAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAATCCT
 3457 ACAGGGATTACTGCCTAT-----TITCTTCTTTCTTTTTTGAGACAGGTCTCACT
 GTACAATTATCCTCACTTAACAGATAAGAAAACTGAGGCTCAGAAGGCTGA-----
 3352 CCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTGCGG-----
 -----GCTATTTGCCCAAGATCACACAGCTTGTAAGTGGTGACAGTTTGGGTTTT
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 CCGAGGCAGGCAGATCAC--AAGGTCAGGAGTTCGAGACCATCCTGGCTAATATGGTGAA 12316
 CCAGCTACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGAGGTGGAGGTTGCAG 12436
 TGAGCCAAGATCGCACCACTGCACTCCAGCCTGAGCGACAGAGCGAGAGCTCCGTATCAAA 12496
 CCGAGGCGGGCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAA 2397
 The invention relates to a novel method for diagnosing and detecting the progression of liver cancer, hepatocellular carcinoma or metastatic liver tumour in a patient, and differentiating metastatic liver cancer from hepatocellular carcinoma in a patient, involving detecting the level of expression of two or more genes represented in ABN9503-ABN94455 in a tissue sample. The method of the invention has hepatotropic, and cytostatic activity. The method is useful for diagnosing and detecting the progression of liver cancer, hepatocellular carcinoma and metastatic liver carcinoma in a patient. The method is useful for identifying expression profiles which serve as useful diagnostic markers as well as markers that can be used to monitor disease states, disease progression, and to expression and metastatic diagnosticy, the efficacy and drug metabolism. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
 Diagnosing and detecting the progression of liver cancer, hepatocellular carcinoma or metastatic liver tumor in a patient, involves detecting the level of expression of two or more genes in a liver tissue sample.
 Gene, liver cancer, ds, hepatocellular carcinoma, hepatotropic, metastatic liver tumour, cytostatic, expression profile, disease state, disease progression; drug toxicity, drug efficacy, drug metabolism.
 ACCCTGTCTCTACTAAAAATACAAAATTAGCCGGACATGGTGGCGCGGCGCCTGTAACC
 AAAAATCGCTTTCAGGCCAGGCGCGGTGGCTCATGCCTGTAATCCCCAGCACTTTGGGAGG
 GAGTTGGAGGTTTCAG
 TGAGCCAAGGTCGTGTCACTGCTGTCCAGCCTGGGTAACAGAGCAACTCTGTCTCAAAAA
 Gaps
 Sequence 76798 BP; 19630 A; 19179 C; 19394 G; 18595 T; 0 U; 0 Other;
 2; Mismatches 942; Indels 180;
 DB 6; Length 76798;
 Vockley
 7.9%; Score 396; DB 6;
53.6%; Pred. No. 5.4e-63,
 to diagnose liver cancer.
 ftp.wipo.int/pub/published_pct_sequences
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 Claim 1; SEQ ID NO 3952; 298pp; English
 Peres-Da-Silva
 2000US-0237054P.
 02-OCT-2001; 2001WO-US030589
 53.6%;
 (first entry)
 Best Local Similarity 53.6
Matches 1300; Conservative
 (GENE-) GENE LOGIC INC
 Alvares C,
 WPI; 2002-426119/45
 used
 WO200229103-A2
 Homo sapiens
 02-OCT-2000;
 13-AUG-2002
 11-APR-2002
 Gene #3952
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ABN97454;
 Query Match
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Webster KR, Jackson
 Claim 5; SEQ ID NO 1467; 141pp; English.
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 ADX06902 standard; DNA; 76798
 (BRIM) BRISTOL-MYERS SQUIBB
 29-JUL-2004; 2004WO-US024424
 29-JUL-2003; 2003US-0490890P
 (first entry)
 dependent kinase activity
 WPI; 2005-163068/17.
 WO2005012875-A2.
 Homo sapiens.
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 .3634 CATGCCTGGCTAATTTTT--GTATTTTTGTAGAGACAGGGTTTCACCATGTTGGCCAGGC 13691
 :3812 TAAAAGAAGAGCAGAGATTGAATTGCATAATAAACACCCCCAAGAAAGGGCTTGCACTTC 13871
 14051
 14352 GGGAGGCCAAGG-CAGTGGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGTCAACAT 14410
 14411 GGGGAAACCTTGTCTCTACTAAAAACCACAAAAATTAGCCAGGCTTGGTGGCCTGTGCCTA 14470
 :3752 TGTAGGCATGAGCCACCATGCCCGGCCTCATGATGTATCCTTGTGTGCCAGACATTATGA 13811
 13872 CCTGTGTCAGGTAGCCAGGATGTGAGGCTGTTCTCTTCTAAGCTAATCAGGAGGTGGGCT 13931
 13932 GGGTTGCAGGTTTAGTTGGTTTTCAGTTTATCTTTGGTTTCAAATATCTTGAATGTGAGAT 13991
 4021
 14172 ATGAAAGTAGCTCATCTAGGAACGCCTTATGCCTCTGGAATTTAGTTCATTTAGTCAA 14231
 4265
 14292 ACATTTAAAAAGTAAAAAGAGTCCAĞGCACAĞTĞGCTCATĞCCAATAATCCTAĞCACTTT 14351
 4445
 TATAGGCGTGAGTCACTGTGCCTGGCCGATTACTGTCTATTTCTTTATTGCTATATCCC 3794
 ------AGCCTAGATATAAACTTTTTTTTTTTAAAACAATCTTGACAA 3901
 4505
GGTTCAAGYGATTCTCCTGCCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCAC 3614
 3734
 TGGTCTCAAACTCCTGACCTCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAAT
 4446 TGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACAGCGAGACTCTATC
 CATGCTTGGCTAATTTTTGTATTTTTAGCAGAGATGGGGTTTTACCATGTTGCCCAGGC
 13992 caggreacracicage de la contra del la contra del la co
 4022 GAATAATATGGCTTAATTTGCT------TATACATCCTCCTGCTCCACTTTAGA
 14112 AGCCCATGCCTGTGACAGTCTTTCTCCCAGCCTGCTTGGGCCCAAGGAAATGAAATTGGA
 4119 AATACACACACACACACACTCACACACTTTTTTTTTTAATGTTTTGCAACTAAGACAA
 14232 GTGCTGTCCGATAGAAGTATAAAGTGAGCCACATACGTAATTTTAAATTTTCTAGTAGGC
 GGAAGTCCAAGGTGGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATAT
 3902 CTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATGACTT
 3962 ITTCATATIGCCTCAAACCTITATIGITACIGITITITCATIGITACTATITIAGICACT
 ATATTAATTAAAAATAACTCAGTTGGGCACAGTGACTCAAGCCTGTAACCACAGTACTTT
 TAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGT
 4070 AGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAG
 GAAACCTGCATTAGAGGATGTTTGTT----
 14591 TCAAAAGAAAAAAAAAAAGTAAAA 14614
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This invention describes a novel method of predicting or determining whether a mammal will respond or is responding to an anti-cancer agent that modulates cyclin-dependent kinase (adk) activity. The method comprises measuring the level of one or more biomarkers selected from 2774 biomarkers given in the specification (nucleotide sequence SEQ ID NO:1246 (Genbank EST w28729) is especially preferred. The method of the invention is utilized in a kit for determining or predicting whether patient would be susceptible or resistant to treatment by an agent modulating cdk activity. The invention also describes a method for utilizing individualized genetic profiles for treating diseases and disorders based on patient's response and molecular level, specialized microarrays comprising the biomarkers described, antibodies directed microarrays comprising the biomarkers described, antibodies directed microarrays comprising the biomarkers described, on the carboxamide, 0.5-L-catalized carboxamide, 0.5-L-catalized salt, Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp. wipo.int/pub/published pot the invention.
 12316
 12258
 2397
 2458 CCAGCTACTTGGGAGACT----------G458 CCAGCTTGGAGGTTTCAG 2491
 Biomarkers useful for predicting or determining the response of a mammal to a cancer treatment comprising administration of a modulator of cyclin-
 CCGAGGCAGGCAGATCAC--AAGGTCAGGAGTTCGAGACCATCCTGGCTAATATGGTGAA
 ACCCTGTCTCTACTAAAAATACAAAATTAGCCGGACATGGTGGCGAGCGCCTGTAACC
 2278 AAAAATCGCTTTCAGGCCAGGCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGG
 CCGAGGCGGGCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAA
 Gaps
 Sequence 76798 BP; 19630 A; 19179 C; 19394 G; 18595 T; 0 U; 0 Other;
 ID NO 1467.
 2; Mismatches 942; Indels 180;
 Query Match

7.9%; Score 396; DB 14; Length 76798;
Best Local Similarity 53.6%; Pred. No. 5.4e-63;
Matches 1300; Conservative 2; Mismatches 942; Indels 180:
 ds.
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Cyclin-dependent kinase modulation biomarker DNA SEQ
 cytostatic; cyclin-dependent kinase; cdk; biomarker;
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2000US - 0231244P

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2000US - 0232394P

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2000US - 0232394P

2000US - 0232394P

2000US - 0232340P

2000US - 023240P

2000US - 0232401P

2000US - 0232401P

2000US - 0232401P

2000US - 0232494P

2000US - 023424P

2000US - 023494P

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2000US - 0241826P
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2000US - 0246526P
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17-NOV-2000;
17-NOV-2000;
 Human, immune, haematopoietic, immune/haematopoietic antigen, cancer, cytostatic, gene therapy, vaccine, metastasis, ds.
 Human immune/haematopoietic antigen genomic sequence SEQ ID NO:21743
 14591 TCAAAAGAAAAAAAAAAAGTAAAA 14614
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 31-JAN-2000, 2000US-0179065P.

24-FEB-2000, 2000US-01804664P.
02-MAR-2000, 2000US-01804664P.
02-MAR-2000, 2000US-0180474P.
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 17-JAN-2001; 2001WO-US001354
 06-NOV-2001 (first entry)
 WO200157182-A2
 Homo sapiens
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TTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGGATTACTG 3469
 irrircagaarrerrrerragieragrarrirrarraaarrrraaaaraarrirarraa 2288
 AGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACTGCAC 4474
 GGAGAATTGCTGGAAACCCGGGAGGCTGCAGTGGGCTGAGATCGCACCGCACTGCAC 2820
 GCGATCCACCCCCTCCCCAAAGTCCTGGGATTACCGGTATGAGCCA-CCGCACC 2587
 3650 TGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCTGCCTG
 CCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGATTACTG
 TTTTAGTAGAGATGGGGTTTCACTATTTGGCCAGGCTGGTCTTGAACTCCTGACCTCAA
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 GTCAGGAGTTCAAGACCAGCCTGGCCAACATGGCAAAAACCCGTCT-----AAATATA
 GCTTCTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTTTCACTCTTGTTGCCCAGG
 AGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCTCCTGAGT
 AGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTAGCAGAGA
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 TCTATTTTTTTTTTTGCTATATCCC-----CAGATCTAGAGCAGTGTCTGACATATAG
 TTCTTTATTCACCTAAAATTATTGCTCAGATTTTAGGTTTTTAGGAGGAGGAGCTTCTTTCAG
 TITAAAACAATCITGACAACITIGCAG-AATAAAATACAATCITGCATTCTGCTTTTTCAC
 TTATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGTTA--CTGTTTTTT
 rrargrarccarrearrearringagargagicrrecrergreccaggerge
 AGTGGTGCGATCTTAGCTCACTGCATCCTCCGCCTCCTGGATTCAAGCAATTCTCCTGCC
 CCACTITIAGAAGGCCA----AATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAG
 TCAGCCTCCCAGGTAGCTGGAATTACAGGCGCCCACCACAACGCAGAGCCAGTTTTTGTG
 AGAAATACACACACACACACACT-CACACACAGTTTTTTTAATGTTTGCAACTAAG
 GTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTATACTAAAATACA
 AAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCA
 CCTATTTTCTTCCTTTCTTTTGAGACAGAGTCTCACTTCATCACCTCAACCTCCGTTC
 CATTGTTACTATTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCT
 ACAAGAAACCTGCATTAGAGGATGTTTGTTCATATTAAATTAAAATAACTCAGTTGGGCA
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 AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the cortein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 concerts are present human immune/haematopoietic antigen genomic sequences from the present invention. AAK84942 to AAK5450 and AAM82169 represent sequences used in the exemplification of the present invention
 TGAGTAGCTGGGATTACAGGCATGCATCAACATGTCCAGCTAGTTTATGTA--TTTTTTAG 1667
 TAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAATC 3349
 CTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTGCGGGTAC 3409
 TGCCTGCCTTGGTCTCCCAAAGTGCTGGGAGTAAAGGTGTGAGCCACTGTGCCCAGCTCT 1787
 acids encoding human immune/hematopoietic antigen polypeptides, for preventing, diagnosing and/or treating cancers and metastasis.
 TTTTTTTTTTTTTGAGATAAGAGTCTTGCTCTGTCGCCCAGACTGGAGTGCAGTGGCACA
 CAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAATTTTTTTG
 TITGITGITGITTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGTGGTGCA
 ACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCTGCTGACCTCAGCCTCC
 TAGAGACAGGATTTTACCACGTTGGCCAGGCTGGTCTTGAAATCCTGGCCTCAAGTGC
 Gaps
 Sequence 30620 BP; 7407 A; 7216 C; 7192 G; 8805 T; 0 U; 0 Other;
 Disclosure; SEQ ID NO 21743; 3071pp + Sequence Listing; English.
 64;
 DB 4; Length 30620;
 7.9%; Score 394.8; DB 4; Length 3 60.1%; Pred. No. 7.9e-63; tive 1; Mismatches 508; Indels
 Ruben SM;
17-NOV-2000; 2000US-0249265P.
17-NOV-2000; 2000US-0249297P.
17-NOV-2000; 2000US-0249299P.
17-NOV-2000; 2000US-0249299P.
17-NOV-2000; 2000US-0249300P.
01-DEC-2000; 2000US-0250160P.
05-DEC-2000; 2000US-0251988P.
05-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-0251866P.
08-DEC-2000; 2000US-0251866P.
08-DEC-2000; 2000US-0251869P.
08-DEC-2000; 2000US-0251869P.
08-DEC-2000; 2000US-0251969P.
08-DEC-2000; 2000US-0251969P.
08-DEC-2000; 2000US-0251969P.
, 2000US-0249265P.
2000US-024929P.
2000US-024929P.
2000US-0249290P.
2000US-0250160P.
2000US-0250191P.
2000US-0251030P.
2000US-0251030P.
 05-JAN-2001; 2001US-0259678P.
 (HUMA-) HUMAN GENOME SCI INC
 Query Match
Best Local Similarity 60.1'
Matches 863, Conservative
 Barash SC,
 WPI; 2001-483426/52
 useful for
 Rosen CA,
 3110
 1490
 3170
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 3230
 1610
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The invention relates to a compound 8-80 nucleobases in length targeted to a nucleic acid molecule encoding NF-kappaB repressing factor (NRF). NF kappaB (nuclear factor kappaB) is involved in such cellular processes as the immune response, inflammatory response, oncogenesis, apoptosis, cell cycle, differentiation and cell migration. The compound (an antisense oligonucleotide) specifically hybridises with the nucleic acid molecule encoding NRF (which appears as ADP74371 and comprises nucleotides 469701-conding NRF (which appears as ADP74371 and comprises nucleotides 469701-conding the expression of NRF in Callso included are inhibiting the expression of NRF in cells or tissues, screening for a medulator of NRF, a diagnostic method for identifying a disease state, a kit or assay device comprising the above compound, and treating an animal having a disease or condition associated with NRF. The antisense oligonucleotide is useful for inhibiting the expression of NRF in cells or tissues to
 New antisense oligonucleotides for modulating NF-kappaB repressing factor expression, useful for diagnosing, preventing or treating diseases or
 prevent or treat diseases associated with aberrant NRF expression, such as diseases or conditions involving an immune response. In addition, the compound is used for disquestics, prophylaxis, or as research reagents or kits. The present sequence comprises nucleotides 469701-489000 of the X chromosome containing the NRF gene at Xq24-25, and is a target for the
Human, ds; antisense; NRF; NF-kappaB repressing factor; nuclear factor kappaB; immune response; inflammatory response; oncogenesis; apoptosis; cell cycle; differentiation; cell migration;
 Sequence 19300 BP; 4979 A; 4025 C; 4288 G; 6008 T; 0 U; 0 Other;
 Length 19300;
 Score 394.6; DB 12;
Pred. No. 8e-63;
1; Mismatches 520; I
 Human X chromosome nucleotides 469701-489000
 conditions involving an immune response.
 Claim 1; SEQ ID NO 4; 61pp; English.
 ВР
 DNA; 19300
 7.9%;
larity 60.1%;
Conservative 1
 10-DEC-2002; 2002US-00317271
 10-DEC-2002; 2002US-00317271
 oligonucleotides.
 (ISIS-) ISIS PHARM INC
 WPI; 2004-440344/41.
 (first
 standard;
 chromosome Xq24-25
 US2004110156-A1
 Homo sapiens
 26-AUG-2004
 10-JUN-2004
 antisense
 ADP74371
 ADP74371;
 Query Match
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3158 CACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCTGCTG 3217

3099 TTGGGTTTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTC-TGTCACCCAGGCATGAG rrrrrrrrrrrrrrrrrrrrrrrradandandarrcacrcrrgrrecccaddaa

1; Mismatches

Local Similarity es 908; Conserv

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Indels

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9342
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 3723
 9461
 9521
 9701
 4116
 TTACATTCCATCTTTCCAATA 3438
 9761
 9881
8807 GGCAATGGTGCGATCTCGGCTCACTAAAACCTCTGCCTCCCAGGTTCAAGCGATTCTCCT 8866
 9224 TCGCCTCCCGGGTTCAAGCAATTCTCCTGCCTCAGCCTCGAGTAACAG
 CTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCA-CCTTG
 9642 ATGGGTGTGCAACCTGTTCTACTGAAATGGAAAATGTTACCCTCCTTCTGGTTCAGAAC
 AAAATTTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGG
 CTTCAAGGAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACC
 9044 CGCGCCCCGCTTTTGTTTTTTTTTTTTTGGAAATATGTACTCCCAAATTTGAATGG
 GAGTCTCACTTCATCACCTCAACCT-------CCGTTCAGCTCACTGCAACC
 9164 GAGTCTCGCTCTTGTCGTCCAGGCTGGAGTGCAGTGGAATCTCAGCTCACTGCAACC
 TCTGCCTCCCGGGTTCAAGYGATTCTCCCTAAGCCTCCTGAGTAGCTGGAATTACAA
 9284 GCGCCTGCTACCACACACACAA-TTTTTGTATTTTTTAGTAGAGACGGGGTTTTACCAT
 Aarichriegearracaegrericaeceaeceaeceaeceararnerer - rrragaererec
 TGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAGTAGGTGCTCCAATAAATTG
 rtrctgargtrcagaraagagtcaargaaaaraaaartaactctrggrattraaaractcg
 cascastroresessassescoaccerectricactrorescriteceresaarsaarscore
 TTATGACTITITCATATIGCCTCAAACCTTTATIGTTACTGTTTTTTTCATTGTTACTATT
 9702 rearricareraaagerargaracreacricarirricagaacriccicaaargcraccag
 ----CACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGA
 3822 ACCGICATAACCAACACTICACTIGAGCICCIGITITCIGITICICIGIAGAAAATGITA
 8927 GTATTTTTAGTAGAGACA---GGTTTCTCTATGTTGGTCAGGCTGGTCTCGAATTCCCGA
 GCGTGCACCACCATGCTTGGCTAATTTTTTTTTTTAGCAGAGATGGGGTTTTTACCAT
 TTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTC-
 3398 ATGTGCGGCTACTTATTTCT-
 3278
 3439
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 3784
 9462
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The invention relates to a method of detecting and differentiating between lymphoid cell proliferative disorders associated with at least one gene and/or their regulatory regions in a subject by contacting a target nucleic acid in a biological sample obtained from the subject with at least one, reagent or series of reagents that distinguish between methylated and non-methylated CpG dinucleotides within the target nucleic
 one
 ACTAAAAAATACAAAATTAGCCAGGCGTGGTGGCGCATGCCTGTAATCCCAGCTACTTG
 GGAGGCTGAGGCAGGAGAAGTGCTTGAACCCCGGGAGGTGGAGGTTGCAGTGAGCTGATAT
 crcaecceegrecaerrecrcacaecreraarceraecaerrregeaegereaeger
 ACT-AAAAATACAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCG
 GGATCACTTGAGGTGAGAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCT
 GGAGGCTGAGGCAAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGAT
 CTCAGTTGGGCACAGTGACTCAAGCCTGTAACCACAGTACTTTGGAAGTCCAAGGTGGGT
 Detecting and differentiating between lymphoid cell proliferative disorders comprises contacting a target nucleic acid with at least on reagent that distinguishes between methylated and non-methylated CpG
 SNP;
 Nimmrich I;
 methylated CpG dinucleotide, single nucleotide polymorphism, diffuse large B-cell lymphoma, mantle cell lymphoma, chronic lymphocytic leukemia, small lymphocytic lymphoma,
 ds; lymphoid cell proliferative disorder; methylation;
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 Maier
 Becker E,
 follicular lymphoma; diagnosis; prognosis
 Disclosure; SEQ ID NO 29; 448pp; English.
 regulatory region of human gene RBL2.
 'n,
 BP
 Genc
 standard; DNA; 9289
 25-NOV-2002; 2002WO-EP013265
 23-NOV-2001; 2001DE-01057491
28-DEC-2001; 2001DE-01064501
 AAAAAAAAAG 10252
 (first entry)
 ATAAAATAAAG 4532
 (EPIG-) EPIGENOMICS AG
 Caldwell C,
 WPI; 2003-457621/43
 WO2003044226-A2
 dinucleotides.
 ното варіелв
 29-JAN-2004
 30-MAY-2003
 Burger M,
 9942
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cc acid. The genes and/or their regulatory regions are preferably selected from MDR1, CSNK2B, EGR4, AR, CDK4, RB2, CDC25A, GPIb beta, MYOD1, CDH3, WYCL1, EIK1, ABL1, ABC, BCL2, CDH1, CDKNLB, CDKNLB, CDKNLB, FOS, GSTPI, HIC-1, MGMT, MLH1, MOS, MYC, PTEN, TGFERZ, T973, CDKNLIC, CGSK3beta, ESR1, APAF1, BAK1, BAX or HOXAS. Oligomers, peptide nucleic acid (BNA)-oligomers and/or isolated nucleic acids based on the sequences of the genes are useful for detecting the methylation state of all the CC Gd dinucleotides within one or more the sequences, or their complements, for determining the cytosine methylation state and or single nucleotide collympthisms (SNPs), and for differentiation at least two of the medical conditions such as diffuse large B-ccell lymphoma, mantle cell lymphoma, chronic lymphocytic leukemia, small lymphocytic lymphoma and follicular lymphoma. They are also useful for detecting of a predisposition to, differentiation between subclasses, diagnosis, prognosis, treating and/or represents the 5' and/or regulatory region from one of the above
 3213
 3273
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 2716
 Aagcrgragiggcarggricacagircacagacrccccaggcrraggcgrrccrccrcc 2776
 GTATTITIAGCAGAGATGGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACC 3693
 TCAAGTGATCTGCCTCCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGT 3753
 GCCTGGCCGATTACTGTCTATTTTCTTTATTGCTAT --- ATCCCCAGATCTAGAGCAGT 3809
 3810 GTCTGACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGGCCTAGATATAAACT 3869
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 CACCATGTGCGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCAC 3453
 TITITIGIA TITITIAGIAGAAATGGGGTITCACAAIGTITGCCAGGCIGGICITAAACIC
 CTATTTTTTTTAGAGAGAGAGGTTTCACTATGTCGCCCAGGCTGGTCTCGAACTCCTGTAC
 GTCCAGCCTATATACTTAAGATACTTCTAAACCATTTGTGTTCAACTTCTGTTCTTGCCC
 3094 ACAGITIGGGITITITITITITIGITGITITAGAGACAGGGICTIGCICIGICACCCAGGCA
 2360 ACACTTATTATTTATTTATTTATTTATTGAGATGGAGTTGCTCTGTCGCCAGGCT
 2420 GGAGTGCAGTGGATCCCAGCTAACTGCAGTCTTTGCCTCCTGGGTTCCAGCAATTC
 2480 recrecercia ecrecita de la consta del la consta dell
 TAAAAAAATTTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAAACTC
 CTGGCTTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGC
 3454 AGAACAGGGATTACTGCCTATTTTCTTTCTTTTTTTGAGACAGAGTCTCACTTCATC
 -----rharititidadacadetriritacec
 ACCTCAACCTCCGTTCAGCTCACTGCAACCTCCCCGGGTTCAAGYGATTCTCCTG
 CCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTT
 3154 TGAGCACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCT
 GCTGACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAAT
 Gaps
 Sequence 9289 BP; 2515 A; 1963 C; 2097 G; 2714 T; 0 U; 0 Other;
 Length 9289;
 71;
 Query Match
7.9%; Score 392.4; DB 10; Length
Best Local Similarity 57.9%; Pred. No. 1.8e-62;
Matches 832; Conservative 1; Mismatches 532; Indels
 mentioned genes.
 3214
 2540
 3334
 3394
 2659
 2686
 3514
 3634
 2836
 3694
 2896
 3754
 3274
 2599
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/\*tag= f replace(27806,T) /\*tag= g replace(27816,T)

replace (27869, T) ceplace (27905, A) replace (27916, C)

\*tag=

variation variation

replace (27620, T) eplace (27788,G)

variation variation replace (28194, T) replace (28339, T) replace (28470, C) replace (29010, T) replace (30235, T) /\*tag= p replace(30665,A) /\*tag= q replace(30666,T) replace (30752, T) /\*tag= s replace(31916,T)

\*tag=

variation variation variation variation variation variation rariation variation

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4346
 4106
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 3556 AAAATACAAAATTAGCTGGGTGCGGTGGCGCACACCTGTAATCCCAGATACTCAGGAGG 3615
 CTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCAC 4466
 3616 CTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCGAGATCGTGC 3675
 TICITITICITITITIAAAACAAICITGACAACITITGCAGAAIAAAIACAAICITGCAIT 3929
 3076 rirriacraaggrirircrraagaggrirccarrgrcrcaaaarrgrccrgaaararccig 3135
 3196 CATTATACCTTCCATAAGCCCCTACTTTTGTCCCAGCACTTTTCCCTCTGTCAGTTTACA 3255
 3316 rcaarccrcadarrgcrccrcaarcrggaaargrrrrararcaagcccarrraraaarc 3375
 4167 CAACTAAGACAAGAAACCTGCATTAGAGGATGTTTGTTCATATTAAATTAAAATAACTCA 4226
 3376 AAGGATTGGCAATTTAAAAAATTAAAATAAAGAAAGGAGAATTGGAAATAAAATGAATTG 3435
 3136 TTACCTGTCTACCTGATTTTCTCCTATCTTCAGAGTTCCATTCCTGTCCTCCCGCCTGT
 3987 GTTACTGTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTAT
 3930 CTGCTTTTTCACT---TATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATT
 4047 ACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCC
 CACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTA
 AAAATACAAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGG
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Death-associated protein 6; DAXX; polymorphism; haplotype pair; human; immune disorder; autoimmune disease; population diversity; ds; paternity testing; anthropological lineage; forensic application.
 Human death-associated protein 6 (DAXX) gene.
 Location/Qualifiers
replace(26869,G)
/*tag= a
 AAS00624 standard; DNA; 36221 BP
 (first entry)
 07-SEP-2001
 Homo sapiens
 AAS00624;
```

/\*tag= b replace(27145,A) /\*tag= c replace(27239,G)

replace (26870, T)

variation

variation variation variation

New human death-associated protein 6 (DAXX) gene variants comprising 19 polymorphic sites useful in studying the effect of variation on the biological activity of DAXX and in developing drugs targeting the Stephens JC; Chew A, Choi JY, Denton RR, Nandabalan K, (GENA-) GENAISSANCE PHARM INC WPI; 2001-308220/32. 

05-OCT-2000; 2000WO-US027487.

WO200125245-A2

12-APR-2001

99US-0157909P.

06-OCT-1999;

Claim 1; Fig 1; 97pp; English.

protein.

The sequence represents a DNA encoding human death-associated protein 6 conclocide positions to form one of nineteen possible polymorphic conclocide positions to form one of nineteen possible polymorphic conclocide positions between a trait and a genotype or a haplotype of the DAXX gene can be identified by comparing the frequency of the genotype or haplotype in a population exhibiting the trait with that of a reference population. A higher frequency in the trait population individual can lead to prediction of haplotype pairs the DAXX gene of an individual can lead to prediction of haplotype pairs the baXX gene of related individuals, and may be useful in studying the effect of the variation on the biological activity of DAXX as well as on the binding affinity of candidate drugs targeting DAXX for the treatment of autoimmune diseases and other immune disorders.

Consudying the effect of the variation on the biological activity of DAXX as well as on the binding affinity of candidate drugs targeting DAXX for the treatment of autoimmune diseases and other immune disorders.

Consudying associations between the DAXX genetic variation and a trait such as level of drug response or susceptibility to disease. DAXX

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14592

14652

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TGAGTTATCTATTGCTGTGAAAATTACCCCAAAACCCGGTGGCTCAAAACAACACAC 14292
 TGTTATCTGATGGCTTCTGTGGGGGAGAAATCTGGGAACAGCTTAGCTGGATCCTCTGCT 14352
 4049 ATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTC 4108
 The invention relates to novel tumour suppressor gene, referred to as Lmt. The invention also relates to the field of cancer therapy and cancer diagnostics. The nucleic acid molecule is useful for screening a subject
 14353 TCGGAGGCTCTCATAAGACTGCAGTCTATGAGTTGCCTGTGATCTCATCTGAAAGCTCAG
 TCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACT
 <u>AAAAATACAAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAG</u>
 GCTGAGGCAAGAGATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCA
 New nucleic acid molecule, useful for screening a subject for the presence of an aberration in a gene encoding an LMT.
 Tumour suppressor gene; Lmt; cancer; therapy; cytostatic; human;
 Lmt reverse complement
 WALTER & BLIZA
 Claim 10; Page 233-299; 373pp; English.
 BP.
 standard; DNA; 226475
 (HALL-) HALL INST MEDICAL RES
 suppressor gene,
 07-FEB-2003; 2003WO-AU000126
 07-FEB-2002; 2002AU-00000371
 (first entry)
 AATAAA 14717
 4531
 WPI; 2003-646311/61.
 Mccaw BJ;
 AATAAA
 WO2003066869-A1.
 Human tumour
 Homo sapiens
 20-NOV-2003
 14-AUG-2003
 4226
 14473
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 13582 ACAGTTTTATTTTACAATGTCAATATTTATATAAGACACAAGATCTGTTACACTCTTTTT 13641
 13642 TTTTTTCTGAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAATGCAGTGG-----TATGA 13696
 13815
 13816 CAGACAGGGTTTCACTATGTTAGCCAGGCTGGTCTTGAACTCCTGACCTC--GTTATCCA 13873
 13874 CCTGCCTCGGCCTCCCAAAGTACTGGGATTACAGGTGTGAGCCATTGCACCAAGCCGATT 13933
 13994 TATATACAAAATGGCACATAATTTTCCAAAATGTTTTTAAGGAGCATGCAAGAAGAAAA 14053
 14174 AAGGAATATATGGGTGTATCTGTTACTGAAGATCTGGTGCTCAATTCTAGCACAGTGTA- 14232
 3348
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 .3934 TGTTATACTCTTTGCAGTTATTTAAATCAACAAGGAAAAAATTAGATGCCAAATAAAAA 13993
 CCGCCTGCCTCGGCCTCCCAAAGTGCTAGAATTACAGGCGTGAGCCACCGTGCCCAGTTG 13581
 3168
 CCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAATTTTTT 3288
 3466 ACTGCCTATTTTCTTCCTTTTTTTGAGACAGAGTCTCACTTCATCACCTCAACCTCC 3525
 GAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTAGCA 3645
 GAGATGGGGTTTTTACCATGTTGCCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCTG 3705
 -----GTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATAAAAAC 3868
 TITCITITITCITITITAAAACAATCITGACAACITTGCAGAATAAATACAATCITGCAT 3928
 3929 TCTGCTTTTTCACTTATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTTTATTGT 3988
 3989 TACTGTTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATAC 4048
 TTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGTGGTGC
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 3169 AACCATAGGTCACTGCAGCCTCAACCTCCTGAGGGATCTGCTGACCTCAGCCTC
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 GTAGAGACTGGGTCTTACTACGTTGCCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAAT
 3526 GTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCTCCT
 13697 TATCGGCTCACTGCAACCACCGCCTCCCAGGTTCAAGCAATTCTTGTGCTTCAGCCTCCC
 14114 cérégagececacarricagaagéceceacararcaraarierraaaagaaraaarries
 13464 GTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGATCCCTTGACCTC--GTGAT
 --ACTIATITCTTIACATICCAICTTICCAAIAGAAIGIAAGAICCACAGAACAGGGAII
 CCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGATT
 ccrccraccrisecarcccaaagrecreegarracaegegreaeccaccarere-
 3766 ACTGTCTATTTTTTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATA----
 Gaps
 one or more
 Sequence 36221 BP; 8897 A; 8473 C; 9437 G; 9414 T; 0 U; 0 Other;
 37;
 Score 391.8; DB 4; Length
Pred. No. 2.9e-62;
1; Mismatches 551; Indels
proteins may be used to measure binding affinities of candidate drugs targeting the DAXX protein
 Query Match
Best Local Similarity 59.3%;
Matches 857; Conservative
 3109
 3229
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Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
 74231 GACTTCCTAAAAAAGATGATGAACATCAGTCACCTTTTGTTTATCAACTCTGTTTCA
 AACTAAGACAAGAAACCTGCATTAGAGGATGTTTGTTCATA----TTAATTAAAATAAC
 CCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAAC---CCT
 ACATTGTGCATACTGCTCATTTTCTTGGACCATAGTAGATACCTTAAAGAACAAAAGA
 GATCACCTGAGGTCGGGAGTTCGAGACCAGCCTGAGCAACGTGGAGAAACCCCGTCTTA
 GGGAGGCTGAGGCAAGAGTTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGA
 GATCACTTGAGGTGAGAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTA
 CTAAAAATAC---AAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTC
 Breast cancer related gene sequence SEQ ID NO:1242.
 BP.
 2000US-0209473P.
2000US-0209531P.
2000US-0233133P.
2000US-0233617P.
 2000US-0234009P.
2000US-0234034P.
2000US-0234052P.
2000US-0234509P.
 ABL62905 standard; DNA; 15000
 2000US-0234567P.
2000US-0234923P.
2000US-0234924P.
 2000US-0235077P.
 30-MAY-2001; 2001WO-US010838
 (first entry)
 ACAAAAAGA 74659
 AATAAAATA 4529
 WO200194629-A2
 05-JUN-2000;
18-SEP-2000;
18-SEP-2000;
20-SEP-2000;
20-SEP-2000;
20-SEP-2000;
22-SEP-2000;
 25-SEP-2000;
25-SEP-2000;
 sapiens
 22-SEP-2000;
25-SEP-2000;
 05-JUN-2000;
 25-SEP-2000;
 15-MAY-2002
 13-DEC-2001
 74171
 74351
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 73236 ACAATGITAGGIAAAATITITITITITITITGAGATGGAGICITCGCTCTGICACCCAGGCT 73295
 73296 galdrachardrandaktoragatraktracharatorradaritakantrakantra 73355
 73398 TTTTTGTATTTTTAGTAGAGATGGGGTTTCACCGTGTTAGCTAGGTGGTCTCGATCTC 73457
 /3576 TTTTTTTTTTTTTGAGATGGAGTCTCGCTGTCTCGCTCTGTTGC--CCGGGCTGGAGT 73633
 73813
 73990
 74050
 3633
 73753
 3693
 73871
 3153
 3154 TGAGCACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCT 3213
 3394 CACCATGTGCGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCAC 3453
 3454 AGAACAGGGATTACTGCCTATTTTTTTCTTCTTTTTTGAGACAGAGTCTCACTTCATC 3513
 3573
 3873
 TITITCACTIATCACCTIGITATGACTITITCATATTGCCTC---AAACCTTTATTGTTA 3990
 CTGTTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACAT 4050
 6
 Other;
 The present
 3094 ACAGITIGGGITITITITITIGITGTTGTTTAGAGACAGGGICTTGCTCTGTCACCCAGGCA
 73516 CACCGCCCCCAGCCAATGTTAGGTAAATTTTTAACCACTATGTCTCAATTTCCTTATCTT
 ACCTCAACCTCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTG
 13754 Gratititagradadarggggrificaccgrefiragccaggarggicicgarcreacc
 GACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATAAACTTTCT
 GATAAAAGGGCTCAATACTATAATTCATGTAAAGATTTAACCTAATTCCTGGCACATGGT
 AAATGCTCATTAAATGATAGCTATTATTATAGTTATTACTCACAGTGCAGGCTGTGCAGC
 ccccargargeraarcagracacgccarrrccagggaccrcrcgaccrrrrcrar
 GCTGACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAAT
 3274 TAAAAAATTTTTTGTAGAGCTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTC
 CTGGCTTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGC
 GCAGTTGTGTGATCTCGGCTCACTGCAACTCTGCCTCCCAGGTTCATGCCATTCTCCTG
 CCTAAGCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTT
 3694 ccicadeciecedadiaderidedacededecececedededecedederatritit
 GTATTTTTAGCAGAGATGGGGGTTTTTACCATGTTGCCCCAGGCTGGTCTCAAACTCCTGACC
 TCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGT
 GCCTGGCCGATTACTGTCTATTTTTTTTTTTTTTTTTCCCAGATCTAGAGCAGTGTCT
 Gaps
 25280
 Score 391.4; DB 9; Length 226475;
Pred. No. 4.5e-62;
1; Mismatches 557; Indels 38;
 0 O
for the presence of an aberration in a gene encoding an LMT. sequence is human Lmt reverse complement DNA
 Seguence 226475 BP; 61024 A; 41761 C; 40916 G; 57494 T;
 Query Match 7.8%;
Best Local Similarity 58.9%;
Matches 853; Conservative
 3814
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The present invention describes a method (M1) for screening for an antineoplastic agent. The method involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, determining a change in expression of at least one gene (I) of a signature gene set, where (I) comprises a sequence (S) selected from 8447 sequences (given in ABL61664 to ABL7010), or is at least 95% identical to (S), where a change in expression is indicative of anti-neoplastic activity (I) has cytostatic activity and can be used in gene therapy. MI can be used for screening an anti-neoplastic agent, and can be used for producing a product which is the data collected with respect to the anti-neoplastic agent as a result of MI, and the data is sufficient to convey the chemical structure and/or properties of the agent. MI can be used in the treatment of cancer such
 Screening for anti-neoplastic agent involves exposing cells to a chemical agent to be tested for anti-neoplastic activity, and determining a change in expression of a gene of a signature gene set.
 as colon, breast, stomach, lung, thyroid, oesophageal, ovarian, kidney, prostate or pancreatic cancer, adenocarchnoma, carchnoma, clear cell cancer, infiltrating ductal cancer, infiltrating lobular cancer, squamou cell carcinoma, neuroendocrine carcinoma, papillary carcinoma and Wilm's
 Score 390.8; DB 6; Length 15000;
Pred. No. 3.9e-62;
3; Mismatches 920; Indels 134; Gaps
 Horrigan
 Sequence 15000 BP; 3609 A; 3567 C; 3612 G; 4212 T; 0 U; 0 Other;
 Endress G,
 Ebner R,
 Claim 1; SEQ ID NO 1242; 44pp; English.
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 Carter
 2000US-0236032P.
2000US-0236033P.
2000US-02361034P.
2000US-0236111P.
2000US-0236111P.
2000US-0236113P.
2000US-0237172P.
2000US-0237172P.
2000US-0237173P.
2000US-023718P.
2000US-023728P.
2000US-023728P.
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2000US-023728P.
2000US-023768P.
2000US-023768P.
2000US-023768P.
2000US-023768P.
 2000US-0235637P
2000US-0235638P
2000US-0235711P
2000US-0235720P
2000US-0235840P
2000US-0235863P
 Query Match
Best Local Similarity 54.7%;
Matches 1275; Conservative
 (AVAL-) AVALON PHARM
 WPI; 2002-188264/24.
 02-0CT-2000; 2
02-0CT-2000; 2
02-0CT-2000; 2
02-0CT-2000; 2
03-0CT-2000; 2
03-0CT-2000; 2
 27-SEP-2000;
27-SEP-2000;
27-SEP-2000;
 28-SEP-2000;
28-SEP-2000;
28-SEP-2000;
 28-SEP-2000;
29-SEP-2000;
29-SEP-2000;
 03-OCT-2000;
03-OCT-2000;
01-NOV-2000;
 27-SEP-2000;
 28-SEP-2000;
 PE,
DR,
 Young
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10635
 10695
 10696 ACGATCCTCCTGCCTCGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCTACCACACT 10755
 ATACGTATATATATGTGTATATATATATATAAAAAATATTTTTACTGCATCTTTTC 10215
 TATGITIAGATACACAAATGCCTACCATTGTCACAGTTGCCTATAGTATTTAGTACAG 10275
 10336 GTGAAATTGCCTAACAACACACTTCTCAGAATGCATCCCTGTCATTAGGTGATGTATGAC 10455
 --- 10783
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 TGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGC 3225
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 GGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGGA
 GGGAGACTGAGTTTCAGTGAGCCCAAGGTCGTGTCACTGCTGTCCAGCCTGGGT
 GGGAGGC-----AGAGGTTGCAGTTAGCTGAGATCATGCGACTGCACTCCAGCCTGGCA
 CTTATATTTTTTCAAGCCATAGGATCATTTCTCCTGAAGCATCTTGGCGAAGTCATCCCC
 GACCTATGAATTCTAGTTGGTTCTCAGTAGGCCGGGGGGAAATAATAGTAACAACAGCCA
 2997 TATGGGATAGGTACAATTATCCTCACTTAACAGATAAGAAAACTGAGGCTCAGAAGGCTG
 TTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGTGG
 CTTGATCTCAACTCACTGCGGCCTCAACCTCCCCAGGCTCAAGCAATCCTCCCACCTTAGT
 CTCCCAAGTAGCTGGGACTACGAGCGTGCACCCACCACGCCTGGCTAA-TTAAAAAATTT
 TITIGIAGAGACTGGGTCTTACTACGTTGGCCAGGCTTG-TCTTAAACTCCTGGCTTCAA
 ACCTGTTCCTGAGAGTGGGCAGGTGAGGGCTGACCTATTGCTCTGCACTTACTCCTATCT
 CAGCTG------TCCCTCCCACTTTCCAGGTGCTGCCAGACACATGACAACTGCTAYGA
 TGATTTAGTGTTAATTTTCTTGGTTCTGGGCAGTGTCTCCTTTAATCCTCAGAACAACAC
 TAACATGCTACACAGGTTTGTAGACCAGGAGCAATAAGCTACACTATATAGCCTAGGTGT
 AGCTATTTGCCCAAGATCACACACACTGTAAGTGGTGACAG------TTTGGGTT
TACTAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCCTGTAACCCCCAGCTACTT
 CCAGGCCAAGAAG-CTGGACAGCTGTAAATTTCTGCTGGACAMMCCGTACACCCACACCT
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| 3464 1 | TTACTGCCTATTTTCTTCCTTTCTTTTTGGGACAGAGTCTCACTTCATCACCTCAACCT 3523      |  |
|--------|-----------------------------------------------------------------------|--|
| 3524 C | CCGTTCAGCTCACTGCACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCTC 3583      |  |
| 3584 C | CTGAGTAGCTGGAATTACAAGCGTGCACCACGTGGCTTGGCTAATTTTTGTATTTTTAG 3643<br>  |  |
| 3644 ( | CAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATC 3703<br> |  |
| 3704 7 | TGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGA 3763<br> |  |
| 3764 1 | TTA                                                                   |  |
| 3790 7 | atccccagatctagaggagtgttgacatatagtaggtgctcaataaata                     |  |
| 3850 C | GCACAGCCTAGATATAAACTTTCTTTTTCTTTTTTAAAACAATC 3894<br>                 |  |
| 3895 7 | TTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTT 3954<br> |  |
| 3955 / | AIGACTITITICATAITIGCECAAACCTITAITIGTIACTGITITITICATIGITACTAITIT 4014  |  |
| 4015 7 | AGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCGGTCCACTTTAGAAGGCC 4074       |  |
| 4075 / | AAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCGAGAAATACACACACAC 4131<br>     |  |
| 4132 / | acacacacacacacagititititiaatgitigcaactaagacaagaaccigca 4188<br>       |  |
| 4189 . | -TTAGAGGATGTTTGTTCATATATAAAATAACTCAGTTGGGCACAGTGA 4240<br>            |  |
| 4241 ( | CTCAAGCCTGTAACCACAGTACTTTGGAAGTCCAAGGTGGGTG                           |  |
| 4301 / | agitcgacaccagcctggtcananggtgaaaccctatctgctaaaaatacaaaatt 4360<br>     |  |
| 4361   | AGCTGGGTGTAGTGATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGAA 4420 ·       |  |
| 4421 ' | TTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGC 4480<br> |  |

| AAAG 4532                                     | AAAG 11911                                             |                                                                  |
|-----------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------|
| 4481 CTGGGGGGACACAGCGAGACTCTATCTCAAAAAATAAATA | 11860 CTGGGTGACAGAGTAAGACCCCATCTCAAAAATAAAAATTAAAAAAAA | Search completed: May 12, 2006, 07:27:57<br>Job time : 1975 secs |
|                                               |                                                        | Search completed: May<br>Job time : 1975 secs                    |
| δ                                             | QQ                                                     | S C                                                              |

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| BW722145 UI.E-EOO-<br>BZ605978 WHAAT77TF<br>BP382202 BP382202<br>BQ706343 AGENCOURT | BZ609826 WHABQ6UTR<br>AG165009 Pan trogl | CX780936 HESC3 2 B<br>CR990046 CR990046 | AQ342859 RPCI11-12<br>AQ419352 RPCI-11-2 | ALB33832 Homo sapi   | CR613629 full-leng<br>BQ681302 AGENCOURT | BQ776208 UI-H-FH0-<br>BQ710315 AGENCOIRT | CD516136 AGENCOURT      | BX648311 Homo sapı<br>AW976010 EST388119 | CR925964 Pongo pyg | CK8595/6 FONGO DYG<br>AU120942 AU120942 | CR860168 Pongo pyg<br>AO898730 HS 3129 B | CR859143 Pongo pyg | CA431692 UI-H-DF0-<br>AL110229 Homo sapi | CN359768 170004180 | BUS94689 AGENCOURI<br>AQ393450 CITBI-E1- | BM906989 AGENCOURT | CR751077 DKFZp459E | BQ898614 AGENCOURT | AQ743787 HS_5501_A | BC009270 Homo sapi<br>BI868328 603392289 | AF074667 AF074667 | AL713681 Homo sapi            | AL390128 Homo sapi<br>BU521286 AGENCOURT       | CX786428 HESC3 60 | CR609181 full-leng                     | CR860263 Pongo pyg | CA427039 UI-H-DF0- | BX509360 DKFZp686J<br>CR859082 Pongo pyg | CR860722 Pongo pyg | CK002773 AGENCOURT                       | CA427045 UI-H-DF0-<br>CA431783 UI-H-DF0- | CX785622 HESC3 49  | BU501973 AGENCOURT<br>BI861844 603388872 | CN480313 UI-H-EU0- | BX377759 BX377759  | CR614786 full-leng<br>AL707313 DKFZ0686P | CK000252 AGENCOURT | AL832738 Homo sapi | AGIS7660 Pan trodl | CR615928 full-leng | AF101960 AF101960<br>BZ609884 WHACH76TF | BUSGB185 AGENCOURT | BU633001 UI-H-DF0-<br>BQ070852 AGENCOURT |
|-------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------|------------------------------------------|----------------------|------------------------------------------|------------------------------------------|-------------------------|------------------------------------------|--------------------|-----------------------------------------|------------------------------------------|--------------------|------------------------------------------|--------------------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|------------------------------------------|-------------------|-------------------------------|------------------------------------------------|-------------------|----------------------------------------|--------------------|--------------------|------------------------------------------|--------------------|------------------------------------------|------------------------------------------|--------------------|------------------------------------------|--------------------|--------------------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|-----------------------------------------|--------------------|------------------------------------------|
| BM722145<br>BZ605978<br>BP382202<br>BP306343                                        | 0                                        |                                         |                                          |                      |                                          |                                          | CD516136                |                                          |                    |                                         |                                          |                    |                                          | CN359768           |                                          |                    |                    |                    |                    |                                          |                   |                               | HSM80275<br>BU521286                           |                   |                                        |                    |                    |                                          |                    |                                          |                                          |                    |                                          |                    |                    |                                          | CK000252           |                    | 0 AG15766          | CR615928           |                                         |                    |                                          |
| 671 3<br>689 9<br>618 3<br>918 5                                                    |                                          |                                         |                                          |                      |                                          |                                          |                         |                                          |                    |                                         |                                          |                    |                                          |                    |                                          |                    |                    |                    |                    |                                          |                   |                               |                                                |                   |                                        |                    |                    |                                          |                    |                                          |                                          |                    |                                          |                    |                    |                                          |                    |                    |                    |                    |                                         |                    |                                          |
| 0000                                                                                |                                          |                                         |                                          |                      |                                          |                                          |                         |                                          |                    |                                         |                                          |                    |                                          |                    |                                          |                    |                    |                    |                    |                                          |                   |                               |                                                |                   |                                        |                    |                    |                                          |                    |                                          |                                          |                    |                                          |                    |                    | ω η<br>4. 4                              |                    |                    | υ ru<br>4. 4.      |                    | ւն ը<br>4. 4.                           |                    | ი ი<br>4. 4.                             |
| 299.2<br>298.6<br>298.6                                                             | 297.4                                    | 600                                     | 166                                      | 100                  | 88                                       | 288                                      | . ~                     | 285.2<br>284                             | 283                | 283<br>281.6                            | 281.4                                    | 280.8              | 280.4                                    | 279.2              | 279.2                                    | 277.8              | 277.4              | 277.4              | 277.2              | 277.2                                    | 276.6             | 276.6                         | 276.4                                          | 275.2             | 274.8                                  | 274.8              | 273.8              | 273.4                                    | 273.4              | 272.6                                    | 272.4                                    | 272.4              | 272.2                                    | 271.8              | 271.6              | 271.6                                    | 271.2              | 271.2              | 2717               | 270.6              | 270.6                                   | 270.4              | 270<br>269.8                             |
| C 222                                                                               | 22 27 28 29                              |                                         |                                          | 0 0<br>0 44          | 32<br>0<br>36                            |                                          | 0 6<br>0 0              |                                          | c 42               | C 44                                    | 45<br>46                                 | C 47               | 4, 4,<br>80 Q                            | 0 1                |                                          |                    |                    | C 256              |                    | 59                                       |                   | 2 E9                          |                                                |                   | / 9<br>U<br>U                          |                    |                    | 0 72<br>0 73                             |                    | 76                                       | 77                                       |                    | 0 8 0 c                                  |                    | 83                 | ς<br>89 α<br>4 π                         |                    | C 87               |                    | 06 o               |                                         | C 93               | 90<br>95                                 |
| .1.8<br>iocceleration Ltd.                                                          |                                          | time 12140 Seconds                      | 57 Million cell updates/sec              |                      | tttgagaccagcctggacaa 5001                | ;                                        |                         | ល្អ                                      |                    | 82156650                                |                                          |                    |                                          |                    |                                          |                    |                    |                    |                    |                                          |                   |                               | by chance to have a                            | being pr          | e distribution.                        |                    |                    | Description                              | BU785306 in43g09.y | BU/85040 in43g09.x<br>AQ017732 CIT-HSP-2 | BC024593 Homo sapi                       | AQ839852 260L13-C5 | AL708471 DKFZp686J<br>CD557847 AGENCOIDT | CR858326 Pongo pyg | CR627381 Homo sapi | BU174155 AGENCOURT                       | CRS91254 full-leng | DR761502 HESC4 129 | BUIROSSO AGENCOURT | BQ722917 AGENCOURT | CD702127 EST18651<br>CR860521 Pondo ova | CR599842 full-leng | BQ958903 AGENCOURT<br>BU568843 AGENCOURT |
| GenCore version 5.1.8<br>Copyright (c) 1993 - 2006 Bioco                            | nucleic search, using sw model           | May 12, 2006, 07:28:08; Search tin      | 19273.657                                | SEQ1-4500-9500-7328G | .8<br>ggtcatctcagttcttt                  |                                          | Gapop 10.0 , Gapext 1.0 | 41078325 segs, 23393541228 residue       |                    | : hits satistying chosen parameters:    | length: 0<br>length: 200000000           |                    | Minimum Match 0<br>Maximum Match 1       | first              | #:LSH:                                   |                    |                    |                    |                    | 7: gb_est6:*<br>8: gb_est7:*             | 9: 95 9881:*      | 10: 92_955:1<br>11: 95_9553:* | - is the number of results predicted by chance | than or equal     | derived by analysis of the total score | SUMMARIES          | ery .              |                                          | 10.4 599 5         | 7.0 349 9                                | 6.9 4087 4                               | 6.7 15970 9        | 6.7 347 1<br>6.3 897 6                   | 6.2 3095 4         | 6.2 3775 4         | 6.2 891 5                                | 6.1 1654 4         | 6.1 777 8          | 6.1 832 5          | 6.1 910 5          | 6.0 627 6                               | 6.0 1863 4         | 6.0 946 5 BQ958903<br>6.0 820 5 BU568843 |
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| Db 70 AAATGATCAAGT                   | <b>_</b> |                                           |                           |             |               |      |              |
| i                                    |          | AQ896568 HS_3134_A                        | 9 AQ896568                | 857         | v.            | 56   | 150          |
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| 10/1                                 | <b>)</b> |                                           | 5 BQ681678                | 910         | 5.3           | 1 (1 | 146          |
|                                      |          |                                           |                           | 778         | ι'n           | 56   | C 144        |
| Matches 522; Conservati              |          | CF127074 UI-HF-ETO                        | _                         | 729         |               | 7 7  | 1 ~          |
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|                                      |          |                                           | _                         | 3204        | ų.            | 56   | Н.           |
| 314-36<br>ORIGIN                     |          | AQ356404 CITB1-E1-<br>AV762220 AV762220   | 9 AQ356404<br>1 AV762220  | 680<br>1345 | . v.          | 9 7  | C 138        |
| Louis,                               |          |                                           | -                         | 009         | 'n            | 56   | н.           |
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| Amplif                               |          | BM013486 603638941                        | 3 BM013486                | 788         | LO L          | 5 2  | c 134        |
| s Ioux                               |          |                                           | 5 BX505562                | 622         | Ŋ             | 5    | Н            |
| Size-s                               |          |                                           | 4 CR857077                | 4756        | n n           |      | 132          |
| /note=                               |          | CD653272 AGENCOURT                        |                           | 820         | LG L          | 56   | <b>н</b> ,   |
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| /tissu                               |          | AQ897240 HS 3144 A                        | 9 AQ897240                | 830         | ស ប           | 9 6  | 127          |
| /clone                               |          |                                           |                           | 1921        | S             | 56   | 7            |
| TOW/                                 |          | AQI64853 HS ZI80 A<br>BM468547 AGENCOHRT  | 3 BM468547                | 943         | υw            | 2 6  | C 124        |
| /organ                               |          |                                           |                           | 877         | ខ             | 1    | ٦,           |
| FEATURES Location                    | [t.      | BM905391 AGENCOURT<br>CB270192 1009099 H  | 3 BM905391<br>6 CB270192  | 988         |               | 56   | 121          |
| High qual                            | -        |                                           | 8 CX786439                | 802         | 'n            | 56   | c 120        |
| (hinoue@im.wust                      | _        | AL390135 Homo sapi                        | 4 HSM802776               | 2930        | ני<br>הי      | 9 6  | 118          |
| obtaining a clo                      |          |                                           | 4 CR627462                | 2930        |               | 70   | 117          |
| Library was con                      |          | AQ583981 RPCI-11-4                        | 9 AQ583981                | 722         | ப ப           | 9 6  | c 115        |
| _                                    |          |                                           |                           | 828         | , w           | 1    | 114          |
| Tel: 617-495-18                      |          | CR858848 Pongo pyg                        | 4 CR858848                | 3287        | τυ τ.<br>4. 4 | 26   | 112          |
| MA 02138                             |          | AG157592 Pan trogl                        | 0                         | 646         | . CO          | 56   | -            |
| Harvard Univers<br>Dept of Molecul   |          | AL832201 Homo sapı<br>CD709038 EST25565   | 4 HSM803508<br>6 CD709038 | 6181<br>613 | υ τυ<br>4. 4. | 26   | 109<br>C 110 |
| Endocrine Pancr                      |          | Homo                                      | -                         | 3146        | ı LO          | 26   | -            |
| COMMENT Other ESTS: 1n4              |          | AL701696 DKFZp686D                        | 1 AL701696<br>5 RIG30659  | 586         |               | 9 6  | c 106        |
| ΑĽ                                   |          |                                           | 5 BU677563                | 704         | S             |      | -            |
| TITLE Endocrine Pancro               |          | CR933654 Homo sapi                        | 4 CR933654                | 923<br>8488 |               | 2 6  | C 103        |
| Cardenas, M., Gil                    |          |                                           |                           | 3179        | ı,            | 5 6  | ٠,           |
| Schmitt, A., The                     |          |                                           |                           | 1108        | ហ             | 56   | -            |
| Hillier, L., Mar                     |          |                                           |                           | 823         | 'n            | 76   | 100          |
| AUTHORS Melton, D., Brown            | _        | BX648923 Homo sapı<br>A1.691690 DKF2n313B | 4 HSM809074               | 5155        |               | 26   | 30 G         |
| 1 (bases 1                           |          | CX871744 HESC4 60                         | 8 CX871744                | 763         | رن<br>4.      | 56   | C 97         |
| Hominidae; Homo                      |          | BQ070834 AGENCOURT                        | 3 BQ070834                | 1036        |               | 56   | 96           |
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## ALIGNMENTS

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Hoo 349; Li (Bases 1 to 349)

S. Adams, M. D., Rounsley, S.D., Zhao, S., Field, C.E., Bass, S., Linher, K., Simon, M. and Venter, J.C.

Use of a random BAC End Sequence Database for Sequence-Ready Map Building (1998)

Other GSSs: CIT-HSP-2308L15.TF

Contact: Mark Adams

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9712 Medical Center Dr., Rockville, MD 20850, USA

Tel: 301 838 0208
 4426 TGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCTGCACTCCAGCCTGGG 4485
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 Email: mdadams@tigr.org
Connes are available from Research Genetics (info@resgen.com). BAC
end search page:
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Size-selected on agarose gel. Average insert size ~lkb. 5'
XhoI site was destroyed after directional cloning.
XhoI site was destroyed after directional cloning.
Amplified once. Contact information: Hiroshi Inoue, MD,
Metabolism Div. (Alan Permutt Lab), Washington University
School of Medicine, Box 8127, 660 South Euclid Ave., St.
Louis, MO 63110, E-mail: hinoue@imgate.wustl.edu, Tel:
314-362-1916, Fax: 314-747-2692."
 HU/W5040 507 bp mRNA linear EST 11-OCT-2002 in43g09.x1 HR85 islet Homo sapiens CDNA clone IMAGE:6125008 3', mRNA sequence.
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 2181 GTAAACATCACAGCAACTATCCACGTGTCATTTTCTAGCAGTGGTTGTCACTGCACCTTC 2240
 429
 489
 Fax: 617-495-8557
Enail: dmelton@biohp.harvard.edu
Enail: dmelton@biohp.harvard.edu
Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@im.wustl.edu)
Seq primer: -400P from Gibco
High quality sequence stop: 443.
 Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 Hominidae, Homo.

1 (bases 1 to 507)
Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K.,
Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S.,
Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A.,
Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J.,
Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R.,
Milliams, T., Jackson, Y. and Bowers, Y.
Endocrine Pancreas Consortium
Unpublished (2000)
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 Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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 Adminidae; Homo.

Strausberg, R. L., Feingold, E. A., Grouse, L. H., Derge, J. G., Strausberg, R. L., Feingold, E. A., Grouse, L. H., Derge, J. G., Strausberg, R. L., Feingold, E. A., Grouse, L. H., Derge, J. G., Strausberg, R. L., Collins, F. S., Wagner, L., Shemmen, C. M., Schuler, G. D., Altschul, S. F., Zeeberg, B., Buetow, K. H., Schaefer, C. F., Bhat, N. K., Hopkins, R. F., Jordan, H., Moore, T., Max, S. I., Wang, J., Haiseh, F., Diatchenko, L., Marusina, K., Farmer, A. A., Rubin, G. M., Hong, L., Stapleton, M., Soares, M. B., Bonaldo, M. F., Casavant, T. L., Stapleton, M. J., Bosak, S. S., Loquellano, N. A., Peters, G. J., Abramson, R. D., Mullahy, S. J., Bosak, S. A., McEwan, P. J., Malek, J. A., Gunaratne, P. H., Richards, S. M., Worley, K. C., Hale, S., Garcia, A. M., Gay, L. J., Hulyk, S. W., Villalon, D. K., Muany, D. M., Sodergren, E. J., Lu, X., Gibbs, R. A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whilting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G. G., Blakesley, R. W., Young, A.C., Scheutz, J., Myers, R. M., Butterfield, Y. S., Krzywinski, M. I., Skalska, U., Smallus, D. E., Schnerch, A., Schein, J. E., Jones, S. J. and Marra, M.A., Generation and intital analysis of more than 15,000 full-length human and mouse cDNA sequences
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 HTC 29-JUN-2004
 553
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 TITLE
 RESULT
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 22 Row: m.Column: 14
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
 CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94305
Web site: http://www.shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
 2078
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 3278
 2317
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 12;
 3394 CACCATGIGGGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCAC 3453
 Submitted (01-MAR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
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 3159 ACAGIGGIGCAACCAIAGGICACIGCAGCCICAACCICCIGAGGGATCIGCIGA
 2079 gradricercarcaracticaricadececeaacerreceaeceaacaagrearerere
 Gaps
U.S.A. 99 (26), 16899-16903 (2002)
 69
 DB 4; Length 4087;
 This clone has the following problem: retained intron. Location/Qualifiers
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58.3%; Pred. No. 3.1e-20;
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 NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
 Natl. Acad. Sci.
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
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Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (BKES); Email s.wiemann@dktz-heidelberg.de; sequenced by EMBL (European Molecular Biology Laboratories, Heidelberg/Germany) within the cDNA sequencing consortium of the German Genome Project.
This clone (DKPZp/Gl0217) is available at the RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany. Please contact RZPD for ordering:
http://www.rzpd.de/cgi-bin/products/cl.cgi?cloneID=DKFZp76100217
Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.
 3163
 3223
 2636
 2581
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SOURCE
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RESULT 5
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A 6-Mb high-resolution physical and transcription map encompassing the hereditary prostate cancer 1 (HPC1) region Genomics 64 (1), 1-14 (2000)
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 Euteleostomi;
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1 (bases 1 to 15970)

Carpten, J.D., Makalowska, I., Robbins, C.M., Scott, N., Sood, R., Connors, T.D., Bonner, T.I., Smith, J.R., Faruque, M. U., Stephan, D.. Pinkett, H., Morgenbesser, S.D., Su, K., Graham, C., Gregory, S.G., Williams, H., McDonald, L., Baxevanis, A.D., Klingler, K.W. and
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 6727 recadriciocarcaranteacercacracida acertecracida de acertecra en recada de acertecra en esta en es
 Cancer Genetics Branch
National Human Genome Research Institute/National Institutes
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelec
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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 Wiemann, S.)
 Ingolstaedter Landstr.1, D-85764 Neuherberg, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome hallysis, German Cancer
Research Center (DKPZ); Email s.wiemann@dkfz- heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
Heidelberg/Germany) within the cDNA sequencing consortium of the
German Genome Project.
No s1 sequence available.
No s1 sequence available.
Phiss clone (DKPZ0686J1752) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERNANY; Email: clone@rzpd.de.
 hlcc3)"
Site_1: SfiIA; Site_2: SfiIB;
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1 (bases 1 to 347)
Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiem:
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LOCUS
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 Hominidae; Hondones, Education Cognition, Financia, Carafilling, Hominidae; Hondones 1 to 897)

S NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

L Unpublished (1999)

Contact: Daniela S. Gerhard, Ph.D.

Office of Cancer Genemics

Contact: Daniela S. Gerhard, Ph.D.

Office of Cancer Genemics

National Cancer Institute / NIH

Bldg. 31 RM10AO. Bethesda, MD 20892

Email: cgapbs=r@mail.nih.gov

Tissue Procurement: Dr. Michael Brownstein

CDNA Library Preparation: Invitrogen Corp

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

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Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764
Neuherberg, GERMANY
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1 (bases 1 to 3095)

Bloecker, H., Boecher, M., Brandt, P., Mewes, H.W., Osangert, A., Fobo, G., Han, M. and Wiemann, S.

The German cDNA Consortium
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 Ltd.,
of the
 German Genome Project.

This clone (DKPZ9469P012) is available at the RZPD Deutsches
Theseourcenzentrum fuer Genemonforschung GmbH in Berlin, Germany.
Please contact RZPD for ordering:
http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKFZp469P012
Further information about the clone and the sequencing project available at http://mips.gsf.de/projects/cdna/.
Location/Qualifiers
 from S. Wiemann, Molecular Genome Analysis, German Cancer
 Research Center (DKFZ); Email s.wiemann@dkfz¬heidelberg.de; sequenced by GBF (National Research Centre for Biotechnology Lt Braunschweig/Germany) within the cDNA sequencing consortium of
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1 (Dases 1 to 891)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
 CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
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 Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Emails wiemannowkiz-heidelberg.de;
sequenced by Medigenomix (Martinsried/Germany) within the cDNA
sequencing consortium of the German Genome Project.
This clone (DKFZ)762F237) is available at the RZPD Deutsches
Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany.
Please contact RZPD for ordering:
http://www.rzpd.de/cgl-bin/products/cl.cgi?CloneID=DKFZp762F237
Further information about the clone and the sequencing project is
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 Neuharberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Gesearch Center (DKFZ); Email s. wiemann@dKfz-heidelberg.de;
Heidelberg/Germany) within the cDNA sequencing consortium of the
German Genome Project. This clone (DKFZ)66C0331) is available at
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http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKFZ)68CC0331
Further information about the clone and the sequencing project is
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 CCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAATTT
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 Direct Submission
Submitted (17-AUG-2004) MIPS, Ingolstaedter Landstr.1, D-85764
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 Poustka, A., Albert, R., Moosmay
Mewes, H.W., Weil, B., Amid, C.,
Wiemann, S.
 The German cDNA Consortium
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 (bases 1 to 5797)
 1. .5797
 902;
 3285
 3105
 3165
 3225
 4803
 Query Match
 Local
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Matches
 TITLE
JOURNAL
 gene
 AUTHORS
 REFERENCE
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 CDS
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/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
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 CR749233 5797 bp mRNA linear HTC 19-AUG-2004
Homo sapiens mRNA; cDNA DKFZp686C0331 (from clone DKFZp686C0331).
CR749233
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 655
 715
 224
 GTGACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCCTTTCTAATGCAGTAT 775
 284
 835
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 404
 955
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 63
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
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 AGCCTCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACACCACCATGCCCA
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 racadecerdadeceacedecedece 609
 CR749233.1 GI:51476197
 6.2%;
ilarity 72.0%;
Conservative
 sapiens (human)
 Best Local Similarity
Matches 451; Conserv
 Homo
 124
 1016
 1076
 536
 169
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 776
 285
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 345
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 476
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ACCESSION
VERSION
KEYWORDS
SOURCE
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 RESULT 12
CR749233/c
LOCUS
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3224 4858 3284 4804 4686

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Direct Submission
Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :
Bublited (20-JUL-2004) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr

Web : www.genoscope.cns.fr)
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enclohed, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen.

Location/Qualifiers
 ATTGCATTTTATTACGTAACAGTAAAATTAGTAAAATAATTGATATACTTTAATTTATAA 3499
 CR591254 110-20UL-2004 Eull-length cDNA clone CSODF001YF08 of Fetal brain of Homo sapiens
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
GCCTCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACACCACCACGCCAGG
 AATAAATAAATAAAATAAAGGATCGGAGAGAAAAAAAAATAAGATTCCTGAAGGTAA
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 4573 GCAGAGATACGTAAATTATGTAATAAAGTTTAAATGCATTTTAACTGTAATCTTATTG
 537 GGCGTGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCA
 477 ATTITACTITATTITAGACGGGCTCACTCTCTCCCCAGGCTGCGGT
 Gaps
 Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
 20;
 Length 1654;
 6.1%; Score 307; DB 4; Length 16
72.0%; Pred. No. 6.3e-17;
ive 0; Mismatches 155; Indels
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Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

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Matches 450; Conservative
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CR591254
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 VERSION
KEYWORDS
SOURCE
ORGANISM
 DEFINITION
 TITLE
JOURNAL
REMARK
 RESULT 13
CR591254
 REFERENCE
AUTHORS
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 AUTHORS
 JOURNAL
 REFERENCE
 FEATURES
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 4396
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 4507
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 4038
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 3798
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 3525
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Similarity
 1117
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 479;
 456
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 Query Match
 Best Local &
Matches 47
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 777 bp mRNA linear EST 21-JUL-2005
HESC4 129 D09.gl A037 NIH MGC 262 Homo sapiens cDNA clone
IMAGE:0971211 5', mRNA sequence.
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 1076
 Hominidae; Homoria, Education Cognities; Filmanes; Catalinin; Hominidae; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes; Homoriaes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)
Contact: Danielas S. Gerhard, Ph.D.
Contact: Danielas S. Gerhard, Ph.D.
Contact: Danielas S. Gerhard, MD 20892
Email: cgapbs-remail.nih.gov
Tissue Procurement: Bresaden, Inc.
CDNA Library Preparation: Express Genomics, Inc.
CDNA Library Preparation: Express Genomics and Bioinformatics,
CDNA Library Preparation: Express Genomics and Bioinformatics,
CDNA Library Preparation: Consortium (LLNL)
DNA Sequencing by: Laboratory for Genomics and Bioinformatics,
University of Georgia
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIML at:
http://image.llnl.gov
Plate: LLAM 17087 row: g column: 17
Seq primer: JENREV (CAGGAAAAAGCTATGACC)
High quality sequence stop: 777.
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 836
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 794
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 973
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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TITLE
JOURNAL
COMMENT
 FEATURES
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//done lib="Wilh MGC 262"
//done lib="Wilh MGC 262"
//done lib="Wetcor: pExpress-1; Site l: Not1; Site 2: ECORV;
RNA obtained from human embryonic steam cells isolated from
the inner cell mass of blastcoyst stage embryos and
differentiated to an early neural progenitor cell type.
Cell line id and NIH Registry designation is BGO1.
Positive for Nestin and Musashi expression. Passage number
18. cDNA primed using oligo-dT primer:
5.-pGACTAGTTCTAGATCGAGAGCGCCCC(T)25-3' and cloned into
the ECORV/Not1 sites of pExpress-1. This primary library
is non-normalized (normalized primary library is
NIH MGC 259). It was constructed by Express Genomics
(Frederick, MD). Sequence ends have been trimmed to
exclude vector and regions below Phred quality 16. Note:
this is a Mammalian Gene Collection library."
 4
 GGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGTGCCCGGCCTTATCACATTA 1114
 204
 574
 264
 634
 694
 754
 450
 874
 510
 934
 994
 690
 ------ TCTCC 390
 515 GTCGCCCAGGCTGGAGTGCGGTGGCGTGATCTCAGATCACTACAACCTCCATCTCCTGGG
 451 TTTTTGAGACGGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGGCTATCTCGGC
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 511 TCACTGCAAGCTCCGCCTCCCGGGTTCACGCCACCTCTCCTGCCTCCTCAGTAGC
 GGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCCCCGGGCACTATTTGTGTTT
 TITATITIDATITITATITITATITITACITITATITITATITITIGAGACGG-GGCTCACTCT
 575 TTCAAATAATTCTCTTGCCTCAGCCTCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGC
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557

497

934

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/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
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1. Kb for average insert length 1.7 kb. This is a primary library non-amplified. Library constructed by Life Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor College of Medicine) and is available through Life
 558 GGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCCCGGCACTATTTGTGTTT 617
318 TITITIGAGACGGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGCTATCTCGGC 377
 378 TCACTGCAAGCTCCGCCTCCCGGGTTCACGCCACTCTCCTGCCTCAGGCCTCCTTAGTAGC 437
 In Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov.
Tissue Procurement: Dr. James R. Lupski
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://inage.llnl.gov
Plate: LLAM13554 row: e column: 03
High quality sequence stop: 622.
High quality sequence stop: 622.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 935)

NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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TITLE
JOURNAL
 RESULT 16
BU838401
LOCUS
 ACCESSION
 VERSION
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 694
 177 AGGTGCCCACCACCACCCCAGCTAATTTTTG----TATTTTAGTAGAGACGGGTT 231
 754
 755 TICCCCITTICIAAIGCAGIAICCAGITICCTIACTIAICACATITATIATITATI 814
 317
 GTCGCCCAGGCTGGAGTGCGGTGGCGTGATCTCAGATCACTACAACCTCCATCTCCTGGG 574
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 815 ATTATTGAGACAGAGTCTTGCTTTGTCGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGC 874
 Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 71
 Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
thtp://image.llnl.gov
 456 TITATITIAATITITATITITATITITACITITATITITATITITIGAGACGG-GGCTCACTCT
 12 marticiscrititititiscritiscritiscrititiscrititisasassassistississis
 TTCAAATAATTCTCTTGCCTCAGCCTCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGC
 635 TGGCACACCACCATGCCCAGCTAATTTTTTGTGTGTTTTTTTGGTAGAGACAGGTTT
 TCACCATGTTGGCCAGGCTGGGTGACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTC
 Hominidae; Home.

1 (bases 1 to 832)

NHH-MGC herp://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
 Gaps
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 Local
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VERSION
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 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 RESULT 15
BU180590
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/aclone lib-"Lubski sympathetic trunk"
/folome lib-"Lubski sympathetic trunk"
/note="Wector: pCMV-SPORT6 (Life Technologies); Site_1:
Not1; Site_2: Sal1; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
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5'-TCGACCCACGCGTCCCGAGCGCCCCT(15)-3'. Size selected >
1'kb for average insert length 1.9 kb. This is a primary library, non-amplified. Library constructed by Life
Technologies and donated by J. Lupski, M.D./Ph.D. (Baylor Technologies."
 CTGGAGTGCGGTGGCGTGATCTCACTACAACCTCCATCTCCTGGGTTCAAATAAT
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 4.
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1 (bases 1 to 910)

1 the Artp://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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 Contact: Robert Strausberg, Ph.D.
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Further information about the clone and the sequencing project is
available at http://mips.gsf.de/projects/cdna/.
Location/Qualifiers
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 Direct Submission
Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764
Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz-heidelberg.de;
sequenced by Medigenomix (Martinsried/Germany) within the cDNA
sequencing consortium of the German Genome Project.
This clone (DKF2p468P2419) is available at the RZPD Deutsches
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Please contact RZPD for ordering:
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 and
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Contact: YiXin Zeng
Cancer Center
Sun Yat-Sen University
651 DongFeng Road East, GuangZhou 510060, China
Tel: 86-1380-9770-743
Fax: 86-20-8775-4506
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 Email: yxzeng@gzsums.edu.cn.
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 Direct Submission
Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
- Web : www.genoscope.cns.fr)
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and Ecoa V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a
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 Contact : Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished
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Homo sapiens (human)
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Note: this is a NIH_MGC Library."
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 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: gapbe-ramail.nih.gov
Tissue Procurement: DCTD/DTP
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
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sequence: 5'-CACGGCCATATGGCC'3' and 3' adaptor sequence:
5'-ATTCTAGAGGCCGGACATG-GT(30)BN-3' (where B = A,
C, or G and N = A, C, G, or T). Average insert size
1.35 kb (range 0.9-4.0 kb). 14/15 colonies contained
inserts by PCR. This library was enriched for full-length
clones and was constructed by Clontech Laboratories (Palo
Alto, CA)."
 472
 629
 899
 Hominidae, Homo.

I (bases I to 820)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Precurement: CLONTECH
CDNA Library Preparation: CLONTECH Laboratories, Inc.
CDNA Library Preparation: CLONTECH Eloscience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M. AG.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2859 row: e column: 12
High quality Sequence stop: 556.
 539
 591 TTTTTTTTTTTTTTTTTTGAGATGGAGTCTCACTCTGTCGCCCAGGCTGGAGTGCAGTGGG 532
 599
 660 ATTITITIGIGITITITITIGITAGAGACAGGITITICACCAIGITIGGCCAGGCTGGGTGA 719
 426 ATTTTTTG-----TATTTTTAGTAGAGATGGGGTTTCACCATGTTAGCCAGGATGGTCTC 372
 371 GATCTCCTGAACTTGTGATCCACCTGCCTC-----GGCCTCCCAAAGTGCTGGGATTAC 318
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 258
 198
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 Euteleostomi;
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 Gaps
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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/mol_type="mRNA"
/db_xref="taxon:9606"
 Homo sapiens (human)
 .820
 Homo sapiens
 Query Match
Best Local Similarity
 840
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 ORGANISM
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/u_xit=="u_xit
 BM722145 671 bp mRNA linear EST 01-MAR-2002 UI-E-E00-ahy-e-13-0-UI.rl UI-E-E00 Homo sapiens cDNA clone UI.eb.200-ahy-e-13-0-UI 5', mRNA sequence.
 960 GCCCCGCTAATTTTTTTTTTTTAATAAGACGGGTTTCATCGTGTTAGCCAGGATG 1019
 1020 GTCTCGATCTCATGACCTTGTGATCCGCCTGGCCTCGGCCTCCCAAAGTGCTGGGATTACA 1079
 Genetics (www.resgen.com).
The following repetitive elements were found in this cDNA sequence: 39-327, >ALU (matched compliment) 352-640, >ALU (matched
 197 TCATGCCATTCTCCTGCCTCCTGAGTAGCTGGGACTACAGGGGCCTGCCACTGC 138
900 TCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCCACCAC 959
 79
 19
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 375 Newton Road, 4156 MEBRF, Iowa City, IA 52242, USA
Tel: 319 315 8250
Tel: 319 315 9260
Tel: 319 315 9562
Tel: 319 315 9562
Tel: 319 316 9562
Tel: 319 316 9562
Tissue Procurement: Dr. Gregg Hageman
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
 Hominidae, Homo.
I (bases 1 to 671)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
 78 GTCTCGATCTCCTGAACTTGTGATCCACCTGCCTCCGGCCTCCCAAAGTGCTGGGATTACA
 Coordinated Laboratory for Computational Genomics University of Iowa 375 Newton Road , 4156 MEBRF, Iowa City, IA 5224;
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 18 GATGTGAGCCACCGCGC 1
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 Contact: Soares, MB
 Homo sapiens
 compliment)
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End-sequence profiling: Sequence-based analysis of aberrant genomes Proc. Natl. Acad. Sci. U.S.A. 100 (13), 7696-7701 (2003)
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 437 AATTITGGTTCACTGCAACCTTCACCTCCTGGGTTCAAGCAGTTCTCCTGCCTCAACCTC
 555 GTAGAGACGGGGTTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTCGTGATCC
 32 rererectacrerriterrerrerrerrerriterrerrerrerrerrerriteagacadad
 GCTCACTCTGTCGCCCAGGCTGGAGTGCGGTGGCGTGATCTCAGATCAACTACAACCTCCA
 TCTCCTGGGTTCAAATACTCTTGCCTCAGCCTCTCAAGTAGCTGGGACTTGTAGCTC
 152 CCTCCTGGGTTCAAATGATTCTCTTGCCTCCAGCCTCCTGAGTAGCTGGGACTATAA----
 317 ccricegecreccaaaarecressarracassessesseseseseresseserresses ristrer
 ATTCTTATTATTATTGAGACAGAGTCTTGCTTTGTCGCCAAGGCTGGAGTACAGTGGTGC
 GATCTCGGCTCACTGCAAGCTCCACCTGCTGGGTTCACGCCATTCTCCCGCCTCAGCCTC
 TITAITITIAITITATTITAATTITIATTITITAATTITAACTITIATTITATTITIGAGACGGG
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 Gaps
 18;
 DB 9; Length 689;
 Score 299.2; DB 9; Length
Pred. No. 4.9e-16;
0; Mismatches 193; Indels
 USA
 Express
 94143-0808,
 Proc. Natl. Acad. Sci. U.S.A. 100 (13), 71288976
Contact: Volik SV
Colin Collins' lab
UCSF Comprehensive Cancer Center
UCSF Box 0808, San Francisco, CA 94143-06
Fax: 415 502 5665
Email: svolik@cc. ucsf. edu
This clone is available from Amplicon Exp
http://www.genomex.com
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 Similarity
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Best Local S:
Matches 463
 208
 506
 999
 989
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 908
 998
 986
 446
 979
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JOURNAL
PUBMED
COMMENT
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 BZ605978 68-JUN-2003 WHAAT77TF Human MCF7 breast cancer cell line library (MCF7_1) Homo Bapiens genomic clone MCF7_1-5N10, genomic survey sequence.
 5.
 first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is CGCGTATACC. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
 GGCGCCTGCCACCACGCCCCGCTAATTTTTTTTTTTTATAATAAAGACGGGTTTCATC 1004
 542
 533
 593
 653
 244
 304
 824
 363
 CAGAGICTIGCTITGICGCCAAGGCIGGAGIACAGIGGIGCGAICICGGCICACIGCAAG 884
 364 cadadricicdereretrateceadecideadrecadrecacadaretredecidedecides
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 CTCCGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCTTCCCGAGTAGCTGGGACTACA 483
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae; Homo.

1 (bases 1 to 689)

Volik, S., Zhao, S., Chin, K., Brebner, J.H., Herndon, D.R., Tao, Q., Kowbel, D., Huang, G., Lapuk, A., Kuo, W.-L., Magrane, G., de Jong, P. Gray, J.W. and Collins, C.
 TGGCTAATATTT----TGTATTTTTTAGTAGAGACGGGTTTCACCGGGTTAGCCAGGAT
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 Gaps
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Pred. No. 5e-16;
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Best Local Similarity 72.9%;
Matches 465; Conservative
 Homo sapiens (human)
 Homo sapiens
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 1005
 543
 1065
 144
 189
 714
 245
 534
 594
 825
 885
 424
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 SOURCE
ORGANISM
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BZ605978
 ACCESSION
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KEYWORDS
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805 376 865 436 925 496

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Page 21

seq1-4500-9500-7328g.rst

| Db   349 CTGGCTCTGTTGCCCAGGCTGCAGTGCAGTGGCACGTCAGGCTCCGC 408     Qy | QY         1011 GCCAGGATGGTCTCGATCTCATGACCTTGTGATCCGCCTGGCCTCCCAAAGTGCT 1070           bb         528 GCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCGCCTCGGTCTCTCAAAGTGCT 587           QY         1071 GGGATTACAGGCATGAGCCACGGGCCGGC 1101           bb         588 GGGATTACAGGCGTGAGCCCGGC 618           RESULT 26 |                                                                                   | Eukaryota; Metazoa; Chordata; Craniata; Verrebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.  REFERENCE 1 (bases 1 to 918) AUTHORS NIH-MGC http://mgc.nci.nih.gov/. TITLE National Institutes of Health, Mammalian Gene Collection (MGC) OORNAL Unpublished (1999) COMMENT Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: Dr. Mark Watson CDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL) DNA Sequencialing by: Agencourt Bioscience Corporation Clone distribution: MGC Clone distribution information can be | found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM2516 row: g column: 12 High quality sequence stop: 632. FEATURES I. 918 /organism="Homo sapiens" /mol_type="mRNA" /dole="mRNA" /lone="mRAGE: 631091" /lab hose="Diagnage: 631091" /lab hose="Diagnage: 631091"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | /clone lib="NIH MGC_113" //orde="Organ: Spleen; Vector: pOTB7; Site_1: XhoI; Site_2: | Query Match 6.0%; Score 298; DB 5; Length 918; Best Local Similarity 68.6%; Pred. No. 5.1e-16; Matches 456; Conservative 1; Mismatches 197; Indels 11; Gaps 3; Qy 3098 THTGGTTTTTTTTTTTGTTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAG 3157 |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                     | Z - E                                                                                                                                                                                                                                                                                                       | .M., Sakakibara,Y., Chiba,<br>i Sugano,S.<br>mouse genes reveals a hom<br>regions | Department of Virology Institute of Medical Science, University of Tokyo 1 Shirokanedai, Minatoku, Tokyo 108-8639, Japan 4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan Email: ysuzuki@ims.u-tokyo.ac.jp. Location/Qualifiers 1. 618                                                                                                                                                                                                                                                                                                                                                                                                                | Query Match         6.0%;         Score 298.6;         DB 3;         Length 618;           Best Local Similarity 73.2%;         Pred. No. 5.9e-16;         A section of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservation of the conservatio | TCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACCACCACGATGCCCAGCTA                        | 230 GATCTCCTAACCTGGTGATCCGCCCGCTCGGCCTCCCAAAGTATTGGGATTACCGCGG- 771 AGTATCCGTTTCTTATTATTATTATTATTATTATTATTGTGGGTGG                                                                                                                   |

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 GSS 09-JAN-2002
 'n.
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 627
 687
 337 -----ACAGGCCCGTGCTACCAAGCCCAGCTAATTTTTG-----TATTTTAATAGAGA 386
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 TCCTGGGTTCAAATAATTCTCTTGCCTCAGCCTCTCAAGTAGCTGGGACTTGTAGCTCTC
 287 TCCTGGGTTCAAGTGATTCTCCTGCCTCCCCGAGTAGCTGGGACT-----
 688 CAGGITITICACCATGITIGGCCAGGCTGGGTGACCTCCCTTTTAGATTCTCCTCCTGC
 387 resisertricacciaristriciscoladaristrocionarioro-ricacerosionarioracorid
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 AAAGACGGGGTTTCATCGTGTTAGCCAGGATGGTCTCGATCTCATGACCTTGTGATCCGC
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 Gaps
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DNA, clone: RP43-032F13.T7, genomic survey
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 Location/Qualifiers
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AG165009
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http://www.genomex.com
Class: BAC ends.
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 al Similarity
457; Conserv
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 Query Match
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 988
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 DEFINITION
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 End-sequence profiling: Sequence-based analysis of aberrant genomes
Proc. Natl. Acad. Sci. U.S.A. 100 (13), 7696-7701 (2003)
12788976
 3330
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 CTGACCTCAAGTGATCTGCCTCGCTCTCCCA-AAGTGCTGGAATTATAGGCGTGAG 3746
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalla, Eutheria, Buarchontoglires, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 810)

Volik, S., Zhao, S., Chin, K., Brebner, J.H., Herndon, D.R., Tao, Q., Kwobel, D., Huang, G., Lapuk, A., Kuo, W.-L., Magrane, G., de Jong, P., Gray, J.W. and Collins, C.
 7
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 - ATTAAAAAAATTTTTTTTTTGTAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAA
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 UCSF Comprehensive Cancer Center UCSF Box 0808, San Francisco, CA 94143-0808, I Tel: 415 502 7066 Fax: 415 502 5665 Email: svolik@cc.ucsf.edu This clone is available from Amplicon Express
 BZ609826.1 GI:31518387
 Homo sapiens (human)
 Colin Collins' lab
 Contact: Volik SV
 sapiens
 3747 TCACT 3751
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 Homo
 186
 3218
 3331
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SOURCE
ORGANISM
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AUTHORS
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JOURNAL
PUBMED
COMMENT
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CR857067 3064 bp mRNA linear HTC 12-NOV-2004
Pongo pygmaeus mRNA; cDNA DKFZp470P0813 (from clone DKFZp470P0813).
CR857067
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DH10B; sites SfilA + SfilB"
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 AAAGACGGGGTTTCATCGTGTTAGCCAGGATGGTCTCGATCTCATGACCTTGTGATCCGC 1047
 2981 CAGTGGCGTGATCTCGGCTCACTGCAAGCT-CACCTCCCAGGTTCACGCGTTCTCCTGC 2923
856
 916
 987
 917 CICAGCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCCACCACGCCCCGCTAAITTTTTT 976
 Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de; sequenced by Medigenomix (Martinsried/Germany) within the CDNA sequenced by Medigenomix (Martinsried/Germany) within the CDNA sequenced control on conscrition of the German Genome Project.

This clone (DKFZp470P0B13) is available at the RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany. Please contact RZPD for ordering:

Please contact AZPD for ordering:

Putth://www.rzpd.de/cgj.bin/products/cl.cgj?CloneID=DKFZp470P0813

Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.

Location/Qualifiers
 Pongo pygmaeus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
 Direct Submission
Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764
Neuherberg, GERWANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
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truncated, wrong orientation"
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 Hominidae; Pongo.
1 (bases I to 3064)
Ottenwaelder, B., Obermaier, B., Deutschenbaur, S., Schaipp, A.,
Mewes, H. W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, M. and
 Gaps
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The German cDNA Consortium
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VERSION
KEYWORDS
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 Submitted (12-106-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou.Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mall:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library RPCI-43 This BAC end was generated during the R&D process and may have higher chance of clone tracking errors.
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 568 TCCTGGGTTCAAATAATTCTCTTGCCTCAGCCTCTCAAGTAGCTGGGACTTGTAGCTCTC 627
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 ------GTACTÁGITÍTÍ 390
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 391 GTTTTTGTTTTTGAGATGGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGTGA 450
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 Euteleostomi;
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 Gaps
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleo
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
 Fujjyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
BAC end sequences of Library RPCI-43
Unpublished
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 Local
 source
 ORGANISM
 Matches
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 CX/80936 736 bp mRNA linear EST 02-MAR-2005
HESC3 2 B04.bl A036 NIH MGC 260 Homo sapiens cDNA clone
IMAGE:30928759 3', mRNA sequence.
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 2503
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 2682 ACGGTGGCTCACACCTGTAATCCCAACACTTTGGGAGGCTGAGGCAGGTGGACCACCTGA 2623
 Hominidae, Homo...

1 (bases 1 to 736)

3 NH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)

Other ESTR: HESC3 2 B04.91 A036

Contact: Daniela S Gerhard, Ph.D.

Office of Cancer Genomics

National Cancer Institute / NIH

Bldg. 31 Rml0A07 Bethesda, MD 20892

Emall: cgapbs:r@mall.nih.gov
Tissue Procurement: BresaGen, Inc.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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 2502 CAGGAGAATTGCTTGAGCCCGGGAGGTGGAGGTTGCAGTTGAACCAAGATTGCGCCACTGC
 CDNA Library Preparation: Express Genomics, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Laboratory for Genomics and Bioinformatics, University of Georgia
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 GTTCACTGCTGTATCTCTAGCTCCTAGGACAGAGCCTGGCACATAGTAAGTGCTCA-ATA
 2562 AAGACATTAGCCAGGTGTAGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGCTGAGG
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 Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: NDAM1172 row: c column: 08
 Seg primer: M13-21 (TGTAAAACGACGCCAGT) High quality sequence stop: 711 POLYA-Yes.
 Location/Qualifiers
 CX780936
CX780936.1 GI:58297726
 Homo sapiens (human)
 Homo sapiens
 1157
 1217
 116
 1097
 source
 VERSION
KEYWORDS
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 DEFINITION
 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 RESULT 30
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 ACCESSION
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/ Lissue type="human embryonic stem cells"
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/ Lab host="bH10B-T1 phage-resistant E. coli"
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/ Lone lib="NHH MGC_260"
/ Lone lib="NHH MGC_260"
/ RNA obtained from human embryonic stem cells isolated from the inner cell mass of blastocyst stage embryos. Cell line id and NHH Registry designation is BGO1. Positive for SSEA3, SSEA4, Tra 1-60, Tra 1-81, CD9, AIX Phos, Oct4 and Nanog expression, negative for SSEA1 expression. Passage number 21. CDNA primed using oligo-dT primer.
S-pGACTAGTTCTAGATCGCGAGCGCCCC((7)25-3' and cloned into the EcoRV/Not1 sites of pExpress-1. This primary library is
 3398
 3518
 3638
 TITAGCAGAGAIGGGGIITITACCAIGITGCCCAGGCIGGICTCAAACTCCTGACCTCAAG 3698
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 TGTGCGGCTACTTATTTTTTTTCCATCTTTCCAATAGAATGTAAGATCCACAGAAC 3458
 3519 AACCTCCGTTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATTCTCCTGCCTAA 3578
 'n.
 179 rrgiatrirragraaaariggggrirgcrarariggccaggcragrcrcaaacrccraac 238
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 NIH_MGC 261). It was constructed by Express Genomics (Frederick, MD). Sequence ends have been trimmed to exclude vector and regions below Phred quality 16. Note: this is a Mammalian Gene Collection library."
 61 GCAGTGGCGGGATCTCGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGCACTTCTTCTG
 CCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAA
 121 CTTCAGCCCCCTGAGTAGCTGGGATTACAGGCACCCACCACCAGGCCTGGATACTT--TT
 ritagradadacadarricriccardiricarcadgerigeretroaacreergacereagg
 TICAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCA
 239 crciagicanticactrocraagicandicana de considera de contra de co
 3459 AGGGATTACTGCCTATTTTTCTTCCTTTTTTTTTTGAGACAGAGTCTCACTTCATCACCTC
 359 TTTATTTATTTTTTGAGATGGAGTTTTGCCCTTGTTGCCCAAGCTGGAGTGCAATGGCAC
 419 GATC----TCAGCTCACTGCAACCTCCCGGGTTCAAGTGATTCTCCTGCCTCA
 GCCTCCTGAGTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATT
 1 TITITITITITITITITITITITITITIGAGATGCACTCTCACTCTTGCCCAGGCTGAAGT
 3279 AAATTITITIGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGC
 Gaps
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Best Local Similarity 66.9%;
Matches 464; Conservative
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712 506 761 446 821 386 881 326 941

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RPCI11-122M7.TV RPCI-11 Homo sapiens genomic clone RPCI-11-122M7,
genomic survey sequence.
 1062 CAAAGTGCTGGGATTACAGGCATGAGCCACGTGCCCGGCCTTATCACATTTATTATTA 1121
 265 ACAGGTGCCTGCCACCATGCCCGGCTAATTTTTTTGTATTTTTTAGTAGAGACAGGGTTTC 206
 Email: hbe@tigr.org
Clones are derived from the human BAC library RPCI-11. For BAC
library availability, please contact Pieter de Jong
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/ordering) or from
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 Use of BAC End Sequences from Library RPCI-11 for Sequence-Ready
 385 AGATGGAGTCTGGCTCTGTCACCCAGGCTGGAGTGCAGTGGTGATCTTGGCTCACTGC
 AAGCTCCACCTGCTGGGTTCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACT
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 CCAGCTAATTTTTGTGTGTTTTTTTGGTAGACAGGTTTTTCACCATGTTGGCCAGGC
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 505 recreceascrecreacereagerearceacececereecereceastrecregar
 <u> AGACAGAGTCTTGCTTTGTCGCCAAGGCTGGAGTACAGTGGTGCGGTTCTCGGCTCACTGC</u>
 Hominidae, Homo.

1 (basea, Homo.

Zhao,S., Adams,M.D., Nierman,W., Malek,J., de Jong,P. and Venter,J.C.
 Map Building
Unpublished (1997)
Unpublished (1997)
Cohter_GSSs: RPCIII-122M7.TJ
Contact: Shaying Zhao, William Nierman, Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Fax: 301 838 0208
 AQ342859.1 GI:4167755
 Homo sapiens (human)
 1122 TIGITITICICI 1133
 74
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 713
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 CR990046 TST 28-JUN-2005 RR990046 RZPD no.9016 Homo sapiens CDNA clone RZPDp9016F115 5',
 Double-stranded cDNA was ligated to SalI adaptors, digested with NotI and cloned into the NotI and SalI sites of the pQE80LSN_cloned vector"
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 532
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 This clone is available from RZPD; http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=RZPDp9016F115 contact RSPD (product - support@rzpd.de) for further information. Primer name: qe3 4, primer sequence: CGGATAACAATTCACACAG. Location/Qualifiers
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 1 (bases 1 to 772)
Hell,O., Ebert,L., Hennig,S., Henze,S., Radelof,U., Schneider,D.
and Korn,B.
 RZPDLIB; (Human T-Lymphocytes) RZPD LIB No.9016
http://www.rzpd.de/cgi-bin/products/set.cgi?libNo=9016 Contact:
 724 TITITITITITITITITITITITIGAGACAĞAĞICITCIĞACICTIĞIIĞCCCAĞĞCTĞĞAĞIĞ
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 Gaps
 RZDD Deutsches Ressourcenzentrum fuer Genomforschung GmbH Heubnerweg 6, D-14059 Berlin, Germany Tel: +49 30 32639 100 Fax: +49 30 32639 111 www.rzpd.de
 GmbH
 32;
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 Contact: Inge Arlart
RZPD Deutsches Ressourcenzentrum fuer Genomforschung
Heubnerweg 6, D-14059 Berlin, Germany
Email: www.rzpd.de
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Unpublished (2005)
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Best Local Similarity
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 1041 GATCCGCCTGCCTCGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACGTGCCCGG 1100
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 501 ACGGGGCTCACTCTGTCGCCCAGGCTGGAGTGCGGTGGCGTGATCTCAGATCACTACAAC 560
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 665
Research Genetics (info@resgen.com). BAC end search page:
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RPCI-i1-205G6.TV RPCI-11 Homo sapiens genomic clone RPCI-11-205G6,
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 384 crrcccaaagrecreggarracagecargagecaccarccareccagecaagegaarerr 325
 library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering) or from the seearch Genet cs (info@resgen.com). BAC end search page: http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.Seq primer: T7
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
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 543 Grichagerrriterecretecretecretecrational articlasses ------rra
 TTCACCATGTTGGCCAGGCTG-----GGTGACCTCCCTTTTAGATTCTCCTCATCCTGCT
 CTATICITICCCCTTTCTAATGCAGTATCCAGTTTCCTTACTTATC------ACATTTA
 498 CAGGTGTCTGCCACCAGGCCCAGCTAATTTTT-----GTGTTTTTAGCAGAGAGAGGGT
 Email: hbe@tigr.org
 514 TGTCGCCCAGGCTGGAGTGCGGTGGCGTGATCTCAGATCACTACAACCTCCATCTCCTGG
 34; Gaps
 Length 613;
 Zhao,S., Adams,M.D., Nierman,W., Malek,J., de Jong,P. Venter,J.C.
 Unpublished (1997)
Other GSSs: RPCI-11-205G6.TJ
Other GSSs: RPCI-11-205G6.TJ
Contact: Shaying Zhao, William Nierman, Mark Adams
Contact: Shaying Zhao, William Nierman, Mark Adams
Department of Enkaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Pax: 301 838 0208
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1 (bases 1 to 613)
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 Homo sapiens
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Local Similarity
les 470; Conserv
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 CA 4687
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 4688
 Query Match
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Homo sapiens mRNA; cDNA DKFZp43401216 (from clone DKFZp43401216).
AL833832
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 980
 324 TATTTGTAATTTTTTTTTGAGATGGAGTCTTGCTCTGTCGCCCAGGCTGGAGTGCAGT 265
 82
 25
 http://www.rzpd.de/cgi-bin/products/cl.cgi?cloneID=DKFZp43401216
Further information about the clone and the sequencing project is
available at http://mips.gsf.de/projects/cdna/.
Location/Qualifiers
 Eukaryoča, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae; Homo.

1 (bases 1 to 5326)

Koehrer,K., Beyer,A., Mewes,H.W., Weil,B., Amid,C., Osanger,A., Fobo,G., Hand Wiemann,S.

The German cDNA Consortium
 Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
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 Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de; sequenced by BMFZ (Biomedical Research Center at the Heinrich-Heine-University, Duesseldorf/Germany) within the cDNA sequencing consortium of the German Genome Project. This clone (DKFZp43401216) is available at the RZPD Deutsches Ressourcenzentrum ter Genomforschung GmbH in Berlin, Germany. Please contact RZPD for ordering:
 GCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCCACCACGCCCCGCTAATTTTTTGTAT
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 1055
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1 (bases 1 to 855)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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 Gaps
 CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
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 Direct Submission
Submitted (20-JUL-2004) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
- Web : www.genoscope.cns.fr)
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization
Unpublished
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CR613629.1
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 658
 165
 220 ceaacrecicacireaetrasercreceaecireaecreceaaagrecreeearracaee 279
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 9
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 Email: cgapbs-r@mail.nih.gov.

Tissue Procurement: James Martin

CDNA Library preparation: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Clone distribution information can be obtained

from Dr. M. Bento Soares, bento-soares@uliowa.edu

The following repetitive elements were found in this CDNA

Sequence: 11-298, >ALU (matched compliment) 320-666, >ALU (matched
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 3345
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 3585
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 3641
 3761
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 Homo sapiens
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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 735 Tricccaaaragcriggacracaagrgcargccaccaracccagcraaar-grrraagrrr
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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NIH-WGC http://mgc.ncl.nih.gov/.
NIH-WGC http://mgc.ncl.nih.gov/.
Unpublished (1999)

Contact: Daniella S. Gerhard, Ph.D.
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 RmLOA77 Betheada, MD 20892
Email: cgapbs-remail.nih.gov
Tissue Procurement: Dr. Michael Brownstein
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Clone distribution: MGC clone distribution information can
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 3164 GGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCA 3223
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 TTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAA 3343
 Hominidae; Homo.

I (bases 1 to 769)

S NIH-MGC http://mgc.nci.nih.gov/.

Lupublished (1999)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
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Contact: Robert Ph.D.
Contact
 CAGGATGGTCTCGATCTTTTGACC-TATGATCCACCTGCCTCGGCCTCCCAAGTGCTGG 576
 708 GGGGTGATCTCGGCTCACTGCAACCTCTGCCTGGGTTCAAGCGATTCTCCTGCCTCA 649
 648 GCCTCCCGAGTAGCTGGGACTATAGGCGCCCGCCACTGTGCCGGCTAATTTTTATA---T 592
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Gaps
 7;
 Score 287.6; DB 5; Length 769;
Pred. No. 4.1e-15;
1; Mismatches 215; Indels 7
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/db_xref="taxon:9606"
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Location/Qualifiers
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 Homo sapiens (human)
 Best Local Similarity 67.0
Matches 453; Conservative
 Homo sapiens
 518
 168
 3224
 3284
 591
 Query Match
 RESULT 38
BQ710315/c
 source
 ORGANISM
 DEFINITION
 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
 ACCESSION
 VERSION
KEYWORDS
 FEATURES
 SOURCE
 ORIGIN
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967 CITCTAGCAGTIATAAATTIAAATCTAGTCTTCTACTTTCTAGTCTATAAATTA 908
 Conservative
 1. .4088
 Similarity
 Matches 619;
 3512 '
 1384
 3808
 1087
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 3988
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 3568
 3868
 3748
 3688
 Query Match
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 1018
 HSM808459 4088 bp mRNA linear HTC 22-SEP-2004 to sapiens mRNA; cDNA DKFZp686119131 (from clone DKFZp686119131).
 7
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 538
 623
 598
 563
 658
 506
 718
 446
 778
 386
 838
 326
 898
 266
 958
 146
 98
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae; Homo.

1 (bases 1 to 4088)

Bloecker, H., Boecher, M., Brandt, P., Mewes, H.W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, M. and Wiemann, S.
host="DH10B-Ton A (Tl and T5 phage resistances)"
 205 CGCCTGGCTAATTTTTTTTTTTTAGTAAAGACGGGGTTTCACTGTGTTAGCCAGGAT
 TTTTTTTTTTTTTTTTCAGATAGAGTCTTGCTTTGTTTTGCCCAGGCTGGAGTGCAAATGG
 622 AGCAATCTTGCCTCAATGCAACCTCTCCCTAGTTCAAGCGATTCTCTTGCCTCAGC
 CTCTCAAGTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACCACCACCATGCCCAGCT
 crcregaeraecreeearracaeecacecacec---creecrcarrarrarrar
 ACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCCTTTCTAATGCAGTATCCA
 445 CCCGCCTCAGCTGCCCAAAGGGCTGGGATTACAGGCATGAGCCACCGTGCCCGGCCTACT
 GTCGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGCTCACTGCAAGCTCCACCTGCTGGG
 TTCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCCACCA
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 CGTGATCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGC
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 Gaps
 4
 Length 688;
 Score 287; DB 6; Length 68
Pred. No. 4.9e-15;
0; Mismatches 195; Indels
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 59
 AGGTGTGAGCCACCGTGCCGGCCCTA
 BX648311.1 GI:34367470
 5.7%;
larity 68.3%;
Conservative
 domo sapiens (human)
 Homo sapiens
 Similarity
 BX648311
 428;
 719
 779
 265
 1019
 682
 539
 599
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 629
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 325
 899
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 RESULT 40
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LOCUS
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VERSION
KEYWORDS
SOURCE
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 Matches
 REFERENCE
 AUTHORS
 ORIGIN
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3511
 3567
 3627
 1325
 3687
 1324 - CCTCTGTATTCCTAGTAGAGACAGGCCTTCACCATGTTGGCCAGGCTGGTCTTGAACTC 1266
 CTGACCTCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGT 3747
 1206
 3867
 1088
 1028
 5.
 3927
 3987
 4046
 hlcc3). Vector pSport1_Sfi; host
 CACTGTGCCTGGCCGATTACTGTCTTTTTTTTTTTGCTATATCCCCAGATCTAGAGCA 3807
 German Genome Project.
This clone (DKP2p686I19131) is available at the RZPD Deutsches Ressourcenzentrum fuer Genomicorschung GmbH in Berlin, Germany. Please contect RZPD for ordering:
http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKRZp686I19131 Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.
Location/Qualifiers
The German cDNA Consortium
Direct Submission
Submitted (22-SEP-2004) MIPS, Ingolstaedter Landstr.1, D-85764
Neuherberg, GERNANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
sequenced by GBP (National Research Centre for Biotechnology Ltd
Braunschweig/Germany) within the cDNA sequencing consortium of t
 1265 CCGACCTCATATGATCCGCCCGGACCCAGCCTCCCAAAGCGTTGGGATTACAGGCGTGAGC
 crecederreadecedecedecedecedenteadedecedecedecedecederraa
 CATACCTAACTATGTCAGTTAACTTAGGCAACAACTACGTGGCACCCAGTCAAAACAGAC
 AAAAAAAGCTGGTTCAGGAATTATTGATTTGTTTTTTGAGATGGAGTCTCCCTTTG
 1444 TCGAGTGCAGTGGTGTGATCTCGGCTCACTGCAACCTCCGCCTCCCAGGCTCAAGCGATT
 3628 TTTTTTGTATTTTTAGCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTC
 1205 caccacacreseccaasscarrarrssrrarscrccaarreccresacarcacarre
 GTGTCTGACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATAAA
 CTITICITITICITITITAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCA
 Arcactaaatccarggagraaaatrccraractrragrgaraggagccrgrarractc
 TTACT-GTTTTTCATTGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTAT
 TCACCTCAACCTCCGT----TCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGYGATT
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 Gaps
 6
 Length 4088;
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 Indels
 5.7%; Score 285.2; DB 4;
56.9%; Pred. No. 2.2e-15;
iive 1; Mismatches 459;
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 /tissue type="uterus"
/clone_lib="686 (synonym: h.
DH10B; sites SfiIA + SfiIB"
/dev_stage="adult"
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CR925964 2128 bp mRNA linear HTC 06-DEC-2004
Pongo pygmaeus mRNA; cDNA DKFZp459D2020 (from clone DKFZp459D2020).
CR925964
 1015 GGATGGTCTCGATCTCATGACCTTGTGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGGA 1074
 ACCACGCCCCCCTAATTTTTTTTTTTTAATAAAGACGGGTTTCATCGTGTTAGCCA 1014
 543
 510
 570
 629
 Neuherberg, GERWANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
sequenced by GBF (National Research Centre for Biotechnology Ltd.,
Braunschweig/Germany) within the cDNA sequencing consortium of the
German Genome Project.
 603
 663
 276
 715
 689
 171
 231
 331 recreacercercarecacerceacerceceaecerceaagreeressarracasses 390
 450
 894
 954
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae, Pongo.

1 (bases 1 to 2128)

1 (bases 1 to 2128)

Bloecker, H., Boecher, M., Brandt, P., Mewes, H.W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, M. and Wiemann, S.

The German cDNA Consortium
 511 CGGGTCCAGACCATTCTCTTTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGAGCCGCC
 630 GGATGGTCTGGATCTCCTGACCTTGTGATCCACCCGCCTTGGCTCCCAAAGTGCTGGGA
 544 TCTCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCCTCTC
 604 AAGTAGCTGGGACTTGTAGCTCTAAGTAGCTGGCACACACCACCATGCCCAGCTAATTT
 TITGIGIGITITITITIGGIAGACAGGITITICACCAIGITGGCCAGGCTGG-----
 716 -GTGACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCCTTTCTAATGCAGTA
 CTTTGTCGCCAAGGCTGGAGTACAGTGGTGCGGATCTCGGCTCACTGCAAGCTCCACTGC
 451 CTCTGCCGCCCAGGCTGGAGTGCCAATGGCGCATCTCGGCTCACTGCAAGCTCCACCTCC
 895 TGGGTTCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCC
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 TCCAGTTTCCTTACTTATCACATTTATTATTATTCTTATTATTGAGACAGAGTCTTG
 Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764
 Gaps
 31;
Score 284; DB 1; Length 75
Pred. No. 8.1e-15;
0; Mismatches 135; Indels
 Pongo pygmaeus (orangutan)
Pongo pygmaeus
 CR925964.1 GI:56403630
 5.7%;
 436; Conservative
 Direct Submission
 Similarity
 1075 TT 1076
 691
 Query Match
Best Local S
Matches 436
 232
 664
 277
 775
 955
 835
 069
 RESULT 42
CR925964/c
 DEFINITION
 ORGANISM
 TITLE
JOURNAL
 ACCESSION
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SOURCE
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 4226
 4466
 EST 02-JUN-2000
mRNA sequence.
 1047 ACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCC 4106
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 907 GANAAGAGGAGCTGCAAAGGCAAGTGCAATGACAGCATGAGTAATTGAAACCTGAGAGCA 848
 787 CTAATAGGCCAGGAAAA-GCTGACCTATATTATGACCATGATTCATCAAAAAAGCCT 729
 609
 549
 488 CAGTGCGCTCCAGGTGATGGAGTGAGGTAATATTTTAGAAAGATTAAATAACTAATGAAG 429
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Assessment of gene expression patterns in a model of colon tumor metastasis using a 19,200 element cDNA microarray Unpublished (2000) Contact: John Quackenbush
The Institute for Genomic Research
 CTGAGGCAAGAGTTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCAC
 548 CCGAGGCAGGAAAATCGCCCGAACCTGAAATGCGGAGGCTGCAGGGAGCCAAGACCGCAC
 1167 CAACTAAGACAAGAAACCTGCATTAGAGGATGTTTGTTCATATTAAAAAATAACTCA
 Hominidae; Homo.
1 (bases 1 to 759)
Hegde, P., Qi,R., Abernathy,K., Dharap,S., Gaspard,R., Gay,C.,
Holt,I.E., Saeed,A.I., Sharov,V., Lee,N.H., Yeatman,T.J. and
Quackenbush,J.
 AW976010 759 bp mRNA linear EST388119 MAGE resequences, MAGN Homo sapiens CDNA,
 9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 3528
Fax: 301 838 0208
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 Email: johnq@tigr.org
Plate: 356
 Homo sapiens (human)
 Forward
 ATAAAGGA 4534
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 Homo sapiens
 primer:
 AW976010
 4227
 728
 4287
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 4407
 4467
 1347
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DEFINITION
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KEYWORDS
SOURCE
ORGANISM
 source
 REFERENCE
AUTHORS
 JOURNAL
COMMENT
 FEATURES
 TITLE
 ORIGIN
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Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKFZ), Emails s. WiemannaGAKEz-heidelberg.de; sequenced by EMBL (European Molecular Biology Laboratories, Heidelberg/Germany) within the cDNA sequencing consortium of the German Genome Project.

This clone (DKFZp468A085) is available at the RZPD Deutsches Ressourcenzentrum fuer Genomeforschung GmbH in Berlin, Germany. Please contact RZPD for ordering:

http://www.rzpd.de/cgqi.bin/products/cl.cgi?CloneID=DKFZp468A085 Further information about the clone and the sequencing project is available at http://mips.ggf.de/projects/cdna/.
 CR859576 3165 bp mRNA linear HTC 12-NOV-2004
Pongo pygmaeus mRNA; cDNA DKFZp468A085 (from clone DKFZp468A085).
CR859576
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SGEKKTKLRATPEALQHODIEERISERQPILCLPGRFAKSKQLTRREMEIEKSLFG
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 /dev_stage="adult"
/note="hypothetical protein (Homo sapiens), differentially
 3166 IGCAACCATAGGTCACTGCAGCCTCAACCTCCAAGGGATCTGCTGACCTCAGC 3225
 Bukāryotā, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
 Hominidae; Pongo.
1 (bases 1 to 3165)
Ansorge, W., Krieger, S., Regiert, T., Rittmueller, C., Schwager, B.,
Ansorge, W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, M. and
 2300 TTTATTATTATTATTATAGAGACAGGGTCTTGTTCTGTAATCCAGGCTGGAGTGCAGTGA
 3106 TITITITGTIGTIGTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGTGG
 Direct Submission
Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764
 Length 3165;
 Score 283; DB 4; Length 31
Pred. No. 3.9e-15;
1; Mismatches 176; Indels
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 The German cDNA Consortium
 (orangutan)
 CR859576.1 GI:55730029
 5.7%;
 Conservative
 .687
 1. .3165
 spliced"
 Pongo pygmaeus
Pongo pygmaeus
 al Similarity
515; Conser
 Wiemann, S.
 Query Match
 Local
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Matches
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 2066
 5
 2006
 1787
 1666 CCACCCCAGCTAA - - TTTTTGTATTTTTAGTTGAGACGAGGTTTCACCATGTTGGCCAG 1609
 1075
 1608 GATGGTCTCGATCTCTTGACC-TATGATCTGCCTGGCCTCGGCCTCCCAAAGTGCTGGAAT 1550
 2005 GCCCCCAAGTAGCTGGGACT-----ATAGGCATGCACCATCACACCAGC 1961
 1906 TCGAACTCCTGACTTCAAGTGATCTGCCCACCTCAGCCTCCCAAAGTACTGGGATTACAG 1847
 1786 TCTGTCGCCCAGGCTGGAGTGCAGTGGCACGATGTTGGCTCACTGCAACCTCTGCCTCCC 1727
 1726 dedricaaccarrecterecereaerececeaeracereceaeracere
 597
 657
 717
 955
 537
 718 GACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCTAATGCAGTATCC 777
 835
 836 TTTGTCGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGCTCACTGCAAGCTCCACCTGCT 895
This clone (DKFZp459D2020) is available at the RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany. Blease contact RZPD for ordering: http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKFZp459D2020 Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.
 2125 TTTTTTTTTTTTTTTTCTGAGACAGAGTCTCACTCTGTTGCCCAGGCTGAAGTGCAGG
 2065 GCATAATTTCGGCTCACTGCAACCTCCACCTCCCGGATTCAAGTGATTCTCGTGCCTCAG
 658 TAATTTTTGTGTGTTTTTTTGGTAGAGACAGGTTTTCACCATGTTGGCCAGGCTGGGT
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 778 AGTITCCTTACTTATCACATTTATTATTATT--CTTATTATTATTGAGACAGAGTCTTGC
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 2128
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Best Local Similarity
 455;
 478
 538
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 926
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 Matches
 gene
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3165 2359

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Gaps

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3166
 3226
 3640
 3698
 TGATCTGCCTGACTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTG 3758
 CR860168 3259 bp mRNA linear HTC 12-NOV-2004 DEFINITION Pongo pygmaeus mRNA; cDNA DKFZp459B2023 (from clone DKFZp459B2023).
 3284
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 3404
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Mahairas, G.G., Wallace, J.C., Smith, K., Swartzell, S., Holzman, T.,
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 2062 ATCCGCCCCCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACGCCTGGC 2121
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 High Throughput Sequencing Center University of Washington 401 Queen Anne Avenue North, Seattle, WA 98109, USA Tel: (206) 616-3618 Fax: (206) 616-3887 Fax: (206) 616-3887 Clones may be purchased from Research Genetics (info@resgen.com). BAC end Web Server: http://www.htsc.washington.edu plate: 3129 row: P column: 8 Seg primer: T
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Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
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 Neuherberg, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
Heidelberg/Germany) within the cDNA sequencing consortium of the
German Genome Project. This clone (DKFZ9592023) is available at
German Germany. Please contact RZPD for ordering:
Berlin, Germany. Please contact RZPD for ordering:
http://www.rzpd.de/cgl-bin/products/cl.cgi?CloneID=DKFZp459B2023
Putther information about the clone and the sequencing project is
available at http://mps.gsf.de/projects/cdna/.
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Poustka, A., Albert, R., Moosmayer, P., Schupp, I., Wellenreuther, R., Mewes, H.W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, M. and
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Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de; sequenced by GBF (National Research Centre for Biotechnology Ltd., Brannschweig/Germany) within the CDNA sequencing consortium of the German Genome Project.

This clone (DKEZp459G0428) is available at the RZPD Deutsches Reseaucenzentrum fuer Genomforschung GmbH in Berlin, Germany. Please contact RZPD for ordering:

http://www.rzpd.de/cgi.bin/products/cl.cgi?CloneID=DKFZp459G0428
Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.
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 813;
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1 (bases 1 to 3337)
Bloecker, H., Boecher, M., Brandt, P., Mewes, H.W., Weil, J. Osanger, A., Fobo, G., Han, M. and Wiemann, S.
The German CDNA Consortium
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1 (bases 1 to 3474)

1 wambutt, R., Heubner, D., Mewes, H.W., Weil, B., Amid, C., Osanger, A., Fobo, G., Han, and Wemann, S.

The German cDNA Consortium
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/note="Organ: Bone; Vector: pT713-Pac (Pharmacia) with a modified polylinker; Site 1: ECRR I; Site 2: Not I;
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 CA431692 672 bp mRNA linear EST 07-NOV-2002
UI-H-DF0-bet-b-22-0-UI.S1 NCI CGAP_DF0 Homo sapiens cDNA clone
UI-H-DF0-bet-b-22-0-UI 3', mRNA sequence.
 Contact: Robert Strausberg, Ph.D.
Email: capabbs-remail.nih.gov
Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
 2876 CTCCCAAGTAGCTGGGACTATAGGCGCGTGCCACCACGCCAGCTAATTTTTGTCT-TTT 2818
 2817 Tradradactrodederricarcardiregroadedecercarcercercaccercan 2758
 1043 TCCGCCTGCCTCGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACGGTGCCCGGGCC 1102
 from Dr. M. Bento Soares, bento-soares@uiowa.edu
The following repetitive elements were found in this cDNA
sequence: 11-299, >ALU (matched compliment) 378-667, >ALU (matched
compliment)
Seq primer: M13 FORWARD
POLYA=Yes.
 982
 922
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae, Homo.
1. (bases 1 to 672)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI-CGAP To Froject (CGAP),
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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 Homo sapiens
 EST
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VERSION
KEYWORDS
SOURCE
ORGANISM
 source
 DEFINITION
 AUTHORS
TITLE
 JOURNAL
 RFERENCE
 CA431692
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2697 -GTGATCCACCCACCTCGGCTTCCATAGTGCTGGGATTACAGGTGTGAGCCACCGCACT 2755
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 USA
 230 Constitution Drive, Menlo Park, CA 94025, 17el: 650 473 8658
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Geron Corporation
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 Hominidae; Homo.
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 Homo sapiens
 CN359768
 EST
 Query Match
Best Local S
Matches 403
 RESULT 50
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 AGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAAAAAT 3282
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 Please contact RZPD for ordering:
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Further information about the clone and the sequencing project is
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Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s wiemannedkfz-heidelberg.de;
sequenced by Agowa (Berlin/Germany) within the cDNA sequencing
consortium of the German Genome Project.
This clone (DKFZp434N174) is available at the RZPD Deutsches
Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany.
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 Direct Submission
Submitted (22-SEP-2004) MIPS, Ingolstaedter Landstr.1, D-85764
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CN359768 718 bp mRNA linear EST 16-MAY-2004
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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658 bp DNA linear GSS 06-MAR-1999
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Use of BAC End Sequences from CalTech Libraries for Sequence-Ready
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 65
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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SOURCE
ORGANISM
 DEFINITION
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S: -AAGCAGTGGTATCAACGCAGAGTGGCCATTACGCCGGG-3' and
 S'-AAGCAGTGTATCAACGCAGAGTGGCCAILACGCCCAILITIONS AND A ATTCTAGAGGCGGCGAGAATG-GT(30)NN-3. Full-length enriched library was constructed using the Clontech Creator SWART kit and size-selected to contain the >0.5 kb size fraction (other fractions present in NIH MGC 141). Library created in the laboratory of M. Brownstein (NIMH,
 AGENCOURT 8842734 NIH MGC_142 Homo sapiens cDNA clone IMAGE:6450267 BU594689
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 932
 271
 992
 211
 151
 390 TTTTTTTGAGATGGAGTCTCACTCTGTCGCCCAGGGTGGAGGCAGTGGCGTGATCTCG 331
 Euteleostomi;
 330 GCTCACTGCAAGCTCTACCTCCCAGGTTCACGTCATTCTCCTGCCTCAGGCTCCCGAGTA
 CDNA Library Preparation: Michael Brownstein Laboratory CDNA Library Preparation: Michael Brownstein Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
Plate: LLCM2620 row: k column: 04
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 Hominidae; Homo.

1 (bases 1 to 888)

NAIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: NCI
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleo
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini
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 BM906989 1064 bp mRNA linear EST 12-MAR-2002
AGENCOURT_6622443 NIH_MGC_124 Homo sapiens cDNA clone IMAGE:5735027
 NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Lupublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: Gapbs-r@mail.nih.gov
Tissue Procurement: Invitrogen
Contact: Strausper Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies (LDLL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Map Building
Unpublished (1997)
Unpublished (1997)
Contact: Shaying Zhao, William Nierman, Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Tel: 301 838 0200
Fax: 301 838 0208
Email: hebetigr.org
Email: hebetigr.org
Clones are available from Research Genetics (info@resgen.com). BAC
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 3610 ACCACCATGCTTGGCTAATTTTTTTTTTTTTTAGCAGATGGGGTTTTTACCATGTTGCC 3669
 -------Trirrgagarggagic 314
 193 GCCACCATGCCCGGCTAA-TTTTTGTTTTTTAGTAGAGACAGGGTTTCGCCATGTTGT 135
 Pongo pygmaeus (orangutan)
Pongo pygmaeus
Eukaryota, Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
Hominidae, Pongo.
1 (bases 1 to 711)
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 3190 CAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGCCTCCCAAGTAGCTGGGACTACGAG
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CR751077.1 GI:51670244
 5.6%;
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 Contact: Mahairas GG, Wallace JC, Hood L
High Throughput Sequencing Center
University of Washington
401 Queen Anne Avenue North, Seattle, WA 98109, USA
Tel: (206) 616-18618
Fax: (206) 616-18618
Fax: (206) 616-18618
Clones are derived from the human BAC library RPCI-11. For BAC
Library availability, please contact Pieter de Jone
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/oxdering_bac.htm)
or from Resear h Genetics (info@resgen.com). BAC end Web Server:
http://www.htsc.washington.edu
 1052
 GSS 16-JUL-1999
 and
 812
 492
 872
 432
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 992
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 Eukaryoca, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
 Hominidae; Homo.
1 (bases 1 to 877)
Mahairas, G.G. Wallace, J.C., Smith, K., Swartzell, S., Holzman, T.,
Keller, A., Shaker, R., Furlong, J., Young, J., Zhao, S., Adams, M.D. &
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 Sequence-tagged connectors: A sequence approach to mapping
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Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
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AGENCOURT 8642570 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6295801
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BQ898614
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
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 772 TGCAGTGGCGCAATCACAGCTCTGCAGTCTGGATCTCCTGGGCTCAAGCGATCCTCCC
 711 G----CTGGGTGACCTCCCTTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCT
 712 ACNICAGCCITIGGAGAAGCIGGACT------ATAGACAIGIGCCACCAT
 GCCCAGCTAATTTTTTTTTTTTTTTTTTTGGTAGAGACAGGTTTTCACCATGTTGGCCAG
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 832 ATATITITITIAAAATATITIAGGGAGAGGGGTCTTGCTCTGGCACTCAGGCTGGAG
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 Hominidae, Homo.
1 (bases 1 to 893)
NHH-MGC Hrp://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 Email: cgapbs-remail.nih.gov
Tissue Procurement: Dr. Mark Watson
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can lettp://image.llnl.gov
http://image.llnl.gov
k column: 02
High quality sequence stop: 612.
High quality sequence stop: 612.
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Contact: Robert Strausberg, Ph.D.
 NIH MGC Library.
 BQ898614.1 GI:22290628
 Homo sapiens (human)
 Best Local Similarity 66.4
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 ordering:
http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKFZp459E1634
Further information about the clone and the sequencing project is available at http://mips.gsf.de/projects/cdna/.
Location/Qualifiers
 350 TGCTGGGATTACAGACATGAGCCACCGCACCGGCCGATTCTTGAGTTTT--TTTTTGTT 293
 Wiemann,
 54
Poustka,A., Albert,R., Moosmayer,P., Schupp,I., Wellenreuther,R.,
Mewes,H.W., Weil,B., Amid,C., Osanger,A., Fobo,G., Han,M. and
Wiemann,S.
 Pongo pygmaeus mRNA (Poustka, A., Albert, R., Moosmayer, P., et al.)
Unpublished (2004)
 Ingolstaedter Landstr.1, D-85764 Neuherberg, Germany This is the 5' sequence of the clone insert Clone from S. Wiemann Molecular Genome Analysis, German Cancer Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de; any. Please contact RZPD for
 470 GACCGCCACCACCCAGCTAATTTTTTTTTTTAGTAGAGATGGGATTTTGCCATGT
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CTCATGACCT - TGTGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATG 1085
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 Hominidae; Homo.
1 (bases I to 942)
Mahairas, G.G., Wallace, J.C., Smith, K., Swartzell, S., Holzman, T.,
Keller, A., Shaker, R., Furlong, J., Young, J., Zhao, S., Adams, M.D. and
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 232 CTCCTGACCTCAGGTGATCCATCGCCTCAACCTCCTAAAGTGCTGGGATTACAGGCTTG 173
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
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Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)
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Sequencing Center
 Contact: Mahairas GG, Wal
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University of Washington
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 JOURNAL
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 1065
 DKFZp781N1434_r1 781 (synonym: hlcc4) Homo sapiens cDNA clone DKFZp781N1434_r1, mRNA sequence.
 GCGCCTGCCACCACGCCCCGCTAATTTTTTTTTTTTAATAAGACGGGGTTTCATCG 1005
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 886 TCCACCTGCTGGGTTCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAAAG 945
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/note="Vector: pSport1_Sfi; Site_1: SfilA; Site_2: SfilB;
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Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
 Ingolstaedter Landstr.1, D-85764 Neuherberg, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dKfz- heidelberg.de;
sequenced by Qiagen (Hilden/Germany) within the CDNA sequencing
consortium of the German Genome Project.
This clone (DKFZp781NA434) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin- Charlottenburg, GERMANY; Email: clone@rzpd.de.
 AATGCAGTATCCAGTTTCCTTACCATTTATTATTATTATTATTATTATTGAGAC
 AGAGTCTTGCTTTGTCGCCAAGGCTGGAGTACAGTGGTGCGATCTCGGCTCACTGCAAGC
 488 GGAGTCTCGCTCTTTCGCCCAGGCTGGAGTGCAGTGGGGTGATCGCTGCTCACTGCAAGC
 al.)
 1 (bases 1 to 782)
Lauber,J., Bahr,A., Mewes,H.W., Weil,B., Amid,C., Osanger,A., Robo,G., Han,M. and Wiemann,S.
EST (Lauber,J., Bahr,A., Mewes,H.W., Weil,B., Amid,C., et al. Unpublished (2003)
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 Homo sapiens
 Homo
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COMMENT
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AUTHORS REFERENCE

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401 Queen Anne Avenue North, Seattle, WA 98109, USA
Tel: (206) 616-3618
Fax: (206) 616-3818
Email: jwallace@u.washington.edu
Clones are derived from the human BAC library RPCI-11. For BAC
library availability, please contact Pieter de Jong
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/ordering bac.htm)
or from Resear h Genetics (info@resgen.com). BAC end Web Server:
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Male blood DNA was isolated from one randomly chosen donor and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 vector at EcoRI sites"
 ŝ
 CTAATTTTTTTTTTTTTAATAAAGACGGGGTTTCATCGTGTTAGCCAGGATGGTCTCG 1025
 .026 ATCTCATGACCTTGTGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATG 1085
 545
 905
 824 TritititicadacGcccrcrcAcrcrcrccAcccAccCAGGCTGAATGCCGTGATC 765
 TCAGATCACTACAACCTCCATCTCCTGGGTTCAAATAATTCTCTTGCCTCAGCCTCTCAA 605
 764 riceccricacracitic reprintental de la reconstancia de la reconstan
 GTAGCTGGGACTTGTAGCTCTCAAGTAGCTGGCACACCACCATGCCCAGCTAATTTTT 665
 661
 666 TGTGTGTTTTTTTGGTAGAGACAGGTTTTCACCATGTTGGCCAGGCTGGGTGACCTCCC 725
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 726 TTTTAGATTCTCCTCATCCTGCTCTATTCTTCCCCTTTCTAATGCAGTATCCAGTTTCCT 785
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAL Plate: 22 Row: j Column: 8
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 848 regrirringágangganteregriarereaceeaceregaggedaggeacatere 907
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 Direct Submission
Submitted (12-707-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
 3175 AGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGATCTGCTGACCTCAGCCTCGCAAGT
 908 AGCTCACTGTAACCTTTGCCG--TGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGT
 Gaps
 1875 bp mRNA linear HTC 04-M-Homo sapiens, Similar to hypothetical protein PRO1722, clone
IMAGE:3342760, mRNA.
 cDNA Library Preparation: Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) by Sequencing by: Genome Sequence Centre, BC Cancer Agency, Vancouver, BC, Canada info@bcgsc.bc.ca
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 5.5%; Score 277.2; DB 4; Length 1
67.6%; Pred. No. 1.6e-14;
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1127
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 NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
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 1308
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 Hominidae, Homo.

S NIH-MGC http://mgc.nci.nih.gov/.

In [bases 1 to 744]

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the 1.M.A.G.E. Consortium/LLNL at:

http://inage.llnl.gov

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DEFINITION
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Note: this is a NIH_MGC Library."
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.larity 54.1%; Pred. No. 3e-91;
Conservative 3; Mismatches 987;
                                                                                4.0
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 11957
LENGTH: 64813
                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 1225; Conserv
                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-11957
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Patent No. 6812339

GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
       12201, A
13365, A
14688, A
13180, A
15137, A
11919, A
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US-09-949-016-13191

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US-09-949-016-16243

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US-09-949-016-14831

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Sequence 16664, Application US/09949016
; Sequence 16664, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANTY VENTER, J. Craig et al.
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CLOOD.307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 16064
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Sequence 15371, Application US/09949016
Patent No. 6812319
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 60/241,755
RRIOR FILING DATE: 2000-10-20
RRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR PAPLICATION NUMBER: 60/231,768
PRIOR PAPLICATION NUMBER: 60/231,498

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                                                                                                                                     Length 304533
                                                                                                                                    Score 434; DB 3; Length 30
Pred. No. 1.4e-88;
3; Mismatches 968; Indels
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PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FRAESEG for Windows Version
SEQ ID NO 15371
LENGTH: 304533
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                                                                                                                                     Query Match
Best Local Similarity 54.3%;
Matches 1269; Conservative
                                                                                 NAME/KEY: misc_feature

. LOCATION: (1) ... (304533)

. OTHER INFORMATION: n = A,T,C

US-09-949-016-15371
                                                   TYPE: DNA
ORGANISM: Human
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| 2449 CCTGTAACCCCAGCTACTTGGGAGACT                                                                                      | 2827 TGGGGCTGGGCAGCAGCACCAGGGGGGGCAGGCCTCTCCTTGACCTAGCTATTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| Db 259231 CAGTGAGCCGAGATCTTGCCACTCCAGCTGGTGGTGAGAGTCCCATCTC 259290  4173 AGACAGAAAACCTGCATTAGAGGATGTTGTTCATATTAAATTAA | Sequence 15372, Application US/09949016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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         Length 35629;
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8.5%; Score 424.6; DB 3;
Best Local Similarity 54.1%; Pred. No. 7.9e-87;
Matches 1272; Conservative 3; Mismatches 922;
                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: misc_feature
; LOCATION: (1)...(35629)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-15786
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258572 TTGAGACACAGTCTTGCTCTGTTGCCCAAGCTGGAGTACCGTGGCACAATCTTGGCTCAC
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                                                                                     258632 TGAAACCTCCACCTGGGTTCAAGCGATTCTCCCATCTCAGCCTTCTGAGTAGCTGGG
                                                                                                                                             CTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGATTACTGTGTATTT
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US-09-949-016-12970/c
; Sequence 12970, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WIMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/231,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTHARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12970
LENGTH: 32068
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ORGANISM: Human
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Sequence 12971, Application US/09949016
; Betent No. 6812339
; GENERAL INFORMATION:
; APPLICANTY VENTER,
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; CURRENT PELLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-0-0-08
; PRIOR FILING DATE: 2000-0-0-08
; NUMBER OF SEQ ID NOS: 207012
; SQFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12-071
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                                                                 AACCACGTGGCTTCAGTAGAACAAGGTTAAGAATTGTTAGCTTAAGGCAATGACGTATT 26366
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                                 <u> aaaaacactraaagaccaggracagracacrcacgccrcraraarcccagcacrrrrggaaggcc</u>
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Pred. No. 6.9e-86;
1; Mismatches 542;
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Best Local Similarity 60.7%;
Matches 910; Conservative 1
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US-09-949-016-12971/c
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ORGANISM: Human
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                                                                                    27493 TTTTTCTTCCTTTTTTTTTTGAGACGGAGTTTCGCTCTTGTTGCCCAGGCTGGAGTGCAA 27434
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                     45;
   Pred. No. 6.9e-86;
1; Mismatches 542; Indels
   60.7%;
Local Similarity 60.79 hes 910; Conservative
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Sequence 12972, Application US/09949016

Sequence 12972, Application US/09949016

Batent No. 681239

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241, 755

PRIOR APPLICATION NUMBER: 60/237, 768

PRIOR APPLICATION NUMBER: 60/231, 498

PRIOR APPLICATION NUMBER: 60/231, 498

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

SPRIOR FILING DATE: 2000-10-03

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 12972

LENGTH. 32-06
                                                          26247 CCCATCTCTACTAAAAATACAAAAATTAGCCGTGCATGGTGGCACACGCCTGTAGTCCC 26188
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                                     AGCTACTCGGGAGGCTGAGGCAAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTG
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8.4%; Score 420.4; DB 3;
Best Local Similarity 60.7%; Pred. No. 6.9e-86;
Matches 910; Conservative 1; Mismatches 542;
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ORGANISM: Human
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Sequence 12973, Application US/09949016

Sequence 12973, Application US/09949016

Patent No. 681239

GENERAL INFORMATION:

APPLICATT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 12973

LENGTH: 32068
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ORGANISM: Human
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NUMBER OF SEQ ID NOS: 2
SOFTWARE: FASTSEQ for W
SEQ ID NO 12974
                                              ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-12974
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US-09-49-016-12974/C
US-09-49-016-12974, Application US/09949016
; Sequence 12974, Application US/09949016
; Batent No. 681239
; GENERAL INFORMATION: Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; TITLE OF ILING DATE: 2000-04-14
; CURRENT FILING DATE: 2000-04-14
; PRIOR FILING DATE: 2000-10-20
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
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Patent No. 681239

GENERAL INFORMATION:
FRICATION OF INVERTION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION WINBER: US/09/949,016
TITLE OF INVENTION NUMBER: 60/241,755
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FASESEQ for Windows Version 4.0
LENGTH: 32068
86425 AACCACGTGGCTTCAGTAGAACAAAGGTTAAGAATTGTTAGCTTAAGGCAATGACGTATT 26366
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60.7%; Pred. No. 6.9e-86;
.ive 1; Mismatches 542; Indels 45;
                                              TGCTCCACTTTAGAAG----
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Best Local Similarity 60.7
Matches 910; Conservative
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US-09-949-016-12975/c
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CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG 3462
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Sequence 1443.6, Application US/09949016

Sequence 1443.6, Application US/09949016

SENERAL INCRMATION:

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WINDER: US/09/949,016

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR PELING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 14436

LENGTH: 32068
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Pred. No. 6.9e-86;
1; Mismatches 542;
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Best Local Similarity 60.7%;
Matches 910; Conservative
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; ORGANISM: Human
US-09-949-016-14436
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RESULT 14
US-09-949-016-14438/, Application US/09949016
; Sequence 14438
; Patent No. 681233
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
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AGCAGAGATGGGGGTTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGA
                                26842 TATACCT -- TATTTTCATCAAATAAATATATGACCTTAAACTACCTGTGTCATACTTA
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Batent No. 6812339

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLO01307
CURRENT APPLICATION NUMBER: US/09/949,016
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-09
PRIOR FILING DATE: 2000-10-09
PRIOR FILING DATE: 2000-10-09
PRIOR FILING DATE: 2000-10-09
PRIOR FILING DATE: 2000-10-09
27256 GGTGATTCGCCTTGGCCTCCCAAAGTGTTGGGATTACCGGCGTGAGCCACTGCGCC 27197
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Pred. No. 6.9e-86;
1; Mismatches 542;
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14437
LENGTH: 32068
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Best Local Similarity 60.7%;
Matches 910; Conservative
                                                                                                                                                                                                                              RESULT 13
US-09-949-016-14437/c
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US-09-949-016-14437
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Sequence 14439, Application US/09949016

patent No. 6812339

GENERAL INFORMATION:
PATENTION OF SEQUENCE 14439, Application US/09949016

patent No. 6812339

GENERAL INFORMATION:
PATEL OF INVENTION:
PILE REPERENCE: CL001307

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

PILE REPERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

PRIOR FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FASE DE NOS: 207012

SEQ ID NO 14439

LENTH: 20208

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60.7%; Pred. No. 6.9e-86;
iive 1; Mismatches 542;
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
FRIOR APPLICATION NUMBER: 66/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-3
PRIOR PILING DATE: 2000-10-3
PRIOR PILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FESTES ESCOOD 10-09-08
SOFTWARE: FESTES OF MINDOWS VETSION 4.0
SEQ ID NO 14438
LENGTH: 32068
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Best Local Similarity 60.7
Matches 910; Conservative
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US-09-949-016-14438
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RESULT 16

US-09-949-016-14440/c

US-09-949-016-14440, Application US/09949016

Saquence 14440, Application US/09949016

Saquence 14440, Application US/09949016

Sacuence 14440, Application US/09949016

SACUENCE 14440, Application US/09949016

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WIMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR PAPLICATION NUMBER: 60/241,755

PRIOR PLING DATE: 2000-10-20

PRIOR PLING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 32068
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                                                                      26305 TAGGCAGGCAGATCAC--GAGGTCAGGAGATCGAGACCATCCTGGCTAACACGGGGAAAC
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US-09-949-016-14440
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                                                                                         3104 TTTTTTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTC-TGTCACCCCAGGCATGAGCACAG
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                                                     45;
                    Length 32068;
                 Score 420.4; DB 3;
Pred. No. 6.9e-86;
1; Mismatches 542;
                   8.4%;
                 Query Match
Best Local Similarity 60.73
Matches 910; Conservative
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Length 32068; Indels

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Sequence 1441, Application US/09949016

Sequence 1441, Application US/09949016

Batent No. 6812339

GENERAL INFORMATION:

APPLICANT: URNER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: 05/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 2077012

SEQ ID NO 14441
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                                                                                                                                 AGCTACTTGTCGGGCTGAGGCAGGAATGGTGTGAACCCGGGAGGCAGAGCTTGCAGTA 26128
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Pred. No. 6.9e-86;
1; Mismatches 542;
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Best Local Similarity 60.7%;
Matches 910; Conservative
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US-09-949-016-14441/c
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ORGANISM: Human
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                                                   TATTTTTTTTTTTTGAGATGGAGTTTTGCTCTTGTTGCCCAGGCTGGAGTGCAATGAGG 27080
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Sequence 15628, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                   | FEATURE:
| NAME/KEY: misc feature
| LOCATION: (1)...(31111)
| OTHER INFORMATION: n = A,T,C
| US-09-949-016-15628
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 913; Conserv
           -09-949-016-15628/c
                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                       SEQ ID NO 15628
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APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0 13637 CACAGCCCATITITIAGCTITAATACATTAATGTCATGAATTACGTTAATTGATTTTCTT 13517 CAAGCAATCCTCCTGCTTTGGCCTCCCATAGTGTTGGAATTACAGGCGTGAGCCACCGCA 13577 13516 TTTTTTGCGCGGAGGGGGAGCGAGTTTCGCTCTTGTTGCCCAGGCTGGAGTGCAATGG 13457 TCCCAAGTAGCTGGGACTACGAGCGTGCACCACGCCTGGCTA-----ATTAAAAA 3280 CAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATG 3400 Traatraatraatritroagacaagatcroccroteccaccaggcroaagrocagrage TTTTTTGTTGTTGTTTAGAGACAGGGTCTTGCTCTGTCACCCCAGGCATGAGCACAGTGGT 2987 AGAACAACAATATGGGATAGGTACAATTATCCTCACTTAACAGATAAGAAAACTGAGGCT 13936 AAAAAGGATGTTGAATTTTATTGACTTTTTTTTTACATCAATTGAAACCATTTTTTAGCT GCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGCC ATTTTTTTTTTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTT TGCGGCTACTTATTTTTTTTTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAG CCTCCGTTCAGCTCACTGCAACCTCCCCGGGGTTCAAGYGATTCTCCTGCCTAAGC CAGAAGGCTGAGCTATTTGCCCCAAGATCACACACTTGTAAGTGGTGACAGTTTGGGTTT Length 31111; Indels 8.4%; Score 419.2; DB 3; llarity 57.8%; Pred. No. 1.3e-85; Conservative 1; Mismatches 629;

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RESULT 19 US-09-920-671-11 ; Sequence 11, Application US/09920671

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Patent No. 6900306

GENERAL INFORMATION:
APPLICANT: C. Frank Bennett
APPLICANT: Susan M. Freier
TITLE OF INVENTION: ANTISENSE MODULATION OF COREST EXPRESSION
FILE REFERENCE: RTS-0297
CURRENT APPLICATION NUMBER: US/09/920,671
CURRENT FILING DATE: 2001-08-01
NUMBER OF SEQ ID NOS: 91
SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 416; DB 3; Length 13
Pred. No. 1.4e-84;
3; Mismatches 948; Indels
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Best Local Similarity 54.0°
Matches 1222; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: unsure
LOCATION: 10445
OTHER INFORMATION: unkno
                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: unBure;
LOCATION: 23754;
OTHER INFORMATION:
US-09-920-671-11
                                                                                                                                                                                                                                            LENGTH: 139257
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APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
CURRENT PEPLICATION NUMBER: 00/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR PELICATION NUMBER: 60/231,768
PRIOR PILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13045
                                                                         38773 ATTTTAGTAGAGACGGGGTTTCACCATATTGGCCAGGCTGGTCTCGAACTCCTGAC--CT 38716
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                   AGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCC
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60.7%; Pred. No. 1.4e-84;
ive 1; Mismatches 511; Indels
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; Sequence 13045, Application US/09949016
; Patent No. 6812339
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NAME/KEY: misc_feature
LOCATION: (1)._.(45300)
OTHER INFORMATION: n = A,T,C or G
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Best Local Similarity 60.7
Matches 877; Conservative
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ORGANISM: Human
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           TCCTGCCTCAGCCTCCCAATAGCTGGGATTACAGGCATGCACCACCATACCCGGGTAAT 38428
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                                                                                                                                                                                                      CGGCTACTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAACAGGG 3462
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Sequence 16807, Application US/09949016

Sequence 16807, Application US/09949016

Batent No. 6812339

GENERAL INFORMATION

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

NUMBER OF SEQ ID NOS: 207012

SEQ ID NO 16807

SEQ ID NO 16807
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TACTGCCTATTTTCTTCCTTTCTTTTTGAGACAGAGTCTCACCTTCATCACCTCAACCTC 3524
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Pred. No. 3.9e-84;
1; Mismatches 490;
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Best Local Similarity 61.0
Matches 878; Conservative
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                                                                                                                                             RESULT 22
US-09-949-016-16807/c
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US-09-949-016-16807
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                                                                                                                                                              CCCCTGACCTCAGGTGATCTGCCCACCTCAGCTTCCCAAAGTGCTGGAATTATAAGTGTG 38308
                                                                                                    -TIGTITCTITTITTITTTTTTTTTTTTTTGAGATAGAGICTCGCTCTGTTCCCCAGGCT 38548
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Pred. No. 6.1e-84;
1; Mismatches 509;
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FLING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR PELING DATE: 2000-10-03
PRIOR PELING DATE: 2000-0-03
PRIOR PELING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
SEQ ID NOS: 207012
SEQ ID NO 11840
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Best Local Similarity 59.4%;
Matches 843; Conservative
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; ORGANISM: Human
US-09-949-016-11840
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Sequence 11840, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF:
FILE REFERENCE: CLO01307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT PILING DATE: 2000-04-14
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APELICANT: USENTER, J. Craig et al.
APELICANT: USENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FRASESEQ FOR WINDOWS Version 4.0
SEQ ID NO 15969
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                                             ATGTACTTGGTATAGGAATGAACTTAGAATATCACTAATAATTATTTAAAATTTTATCAT
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59.4%; Pred. No. 6.1e-84;
tive 1; Mismatches 509;
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; Sequence 15969
; Patent No. 6812339
; GENERAL INFORMATION
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Matches 843; Conservative
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ORGANISM: Human
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APPLICANT: VENTER, J. Craig et al.

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES;
FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: 08/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-00-03

PRIOR FILING DATE: 2000-00-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NOS: 207012

SEQ ID NO 17206

SEQ ID NO 17206
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49.5%; Pred. No. 9.5e-84;
tive 2; Mismatches 1775; Indels 182;
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ORGANISM: Human
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; APPLICANT: VENTER, J. Craig et al.; APPLICANT: VENTER, J. Craig et al.; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: MITH INFLAMMATORY AUTOIMMUNE DISEASE, METHODS OF DETECTION; TITLE OF INVENTION: AND USES THEREOF; FILE REFERENCE: CLO00790; CURRENT APPLICATION NUMBER: US/09/949,002; CURRENT FILING DATE: 2000-01-28; PRIOR FILING DATE: 2000-01-28; PRIOR FILING DATE: 2000-09-08; NUMBER OF SEQ ID NOS: 10823; SOFTWARE: FRAESEQ for Windows Version 4.0; SEQ ID NO 693; LENGTH: 63467
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Pred. No. 1.2e-82;
1; Mismatches 548;
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Best Local Similarity 59.8%;
Matches 874; Conservative
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ORGANISM: Human
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RESULT 28
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Sequence 843, Application US/09949002
Sequence 843, Application US/09949002
Sequence 843, Application US/09949002
Sequence 843, Application US/09949002
Setent No. 6900016
SEREAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION: WITH INFLAMMATORY AUTOIMMUNE DISEASE, METHODS OF DETECTION
TITLE OF INVENTION: AND USES THEREOF
TITLE OF INVENTION: AND USES THEREOF
SETENCE: CLOOO790
CURRENT APPLICATION NUMBER: US/09/949,002
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                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFFWARE: FRELEGE FOR Windows Version 4.0
SEQ ID NO 17289
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llarity 59.8%; Pred. No. 1.2e-82;
Conservative 1; Mismatches 548; Indels 39;
                                                         CTGTCTCAAAAAAAAAAAA 25493
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Sequence 17289, Application US/09949016
Patent No. 6812339
CTATCTCAAAAAAATAAATAAA 4522
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RESULT 29

US-09-949-016-16766/c

Sequence 16766, Application US/09949016

Patent No. 6812339

GENERAL INPORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: 00/241,755

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-10-03

PRIOR PELLING DATE: 2000-10-03

SPRIOR FILING DATE: 2000-10-03

PRIOR SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

LEMCTH. 32-684
                                                                                              GCGAACAGTCTACATCAAACCAGGGTGCTGA-AGTCTCTGTGCCTCCTTCCAAAGCACAG 25995
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Pred. No. 3.2e-82;
1; Mismatches 512;
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Matches 884; Conservative
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59.8%; Pred. No. 1.2e-82;
tive 1; Mismatches 548; Indels
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                        PRIOR APPLICATION NUMBER: 60/231,401
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 10823
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 843
LENGTH: 64518
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       CURRENT FILING DATE:
                                                                                                                                                                        TYPE: DNA
ORGANISM: Human
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US-09-949-002-843
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| Db 26555 ATTCTAGTGGGGAAAGCTGCATTACACAAGATAAATACAAACGATATATAAAAATGAAATGTCAG 26496  Qy 4228 TTGGGCACAGTGACTCGAACCTGTAACCAAGTCTTTGGAAGTCCAAGGTGGT 4282 | RESULT 30 US-09-949-016-15113/c  is Sequence 15113, Application US/09949016  j Patent No. 6812339  j Patent No. 6812339  j GENERAL INFORMATION:     TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  TITLE OF INVENTION: WIMBER: 60/241,755  FILE REFERENCE: CL001307  PRIOR APPLICATION NUMBER: 60/241,755  PRIOR APPLICATION NUMBER: 60/231,768  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: 2000-10-03  PRIOR PILING DATE: | Best Local Similarity   State   A   18   18   18   18   18   18   18                                                   |
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TYPE: DNA
ORGANISM: Human
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Patent No. 681239
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION:
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION:
UNERRY APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-2
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
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                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                     Indels 131;
                                                                                                                                                                                                                                      Length 17013;
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                                                                                                                                                                                                                                        Score 403.6; DB 3;
Pred. No. 3.7e-82;
3; Mismatches 922;
                                                                       4.0
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 16229
LENGTH: 17013
                                                                                                                                                                                                                                      8.1%;
Best Local Similarity 54.7%;
Matches 1276; Conservative
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RESULT 32
US-09-99-016-13968
1 Sequence 13968, Application US/09949016
1 Sequence 13968, Application US/09949016
2 Sequence 13968, Application US/09949016
3 Fatent No. 6812339
3 GENERAL INFORMATION:
3 APPLICANTION:
4 APPLICANTION:
5 TITLE OF INVENTION:
5 TITLE OF INVENTION:
6 TITLE REPERENCE: CL001307
7 CURRENT APPLICATION NUMBER: US/09/949,016
7 CURRENT APPLICATION NUMBER: 60/241,755
7 PRIOR APPLICATION NUMBER: 60/241,755
7 PRIOR APPLICATION NUMBER: 60/231,768
7 PRIOR APPLICATION NUMBER: 60/231,498
7 PRIOR FILING DATE: 2000-10-20
7 PRIOR FILING DATE: 2000-10-80
7 PRIOR FILING DATE: 2000-10-80
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-TAACTCAGTTGGGCACAGTGA
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                                                                                               61; Gaps
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58.9%; Pred. No. 1.2e-81;
iive 1; Mismatches 555;
     -TTAGAGGATGTTTGTTCATATTAATTAAAA-
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OTHER INFORMATION: n = A,T,C or G
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Matches 886; Conservative
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LOCATION: (1)...(68444)
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ORGANISM: Human
FEATURE:
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                                                    CTTGATCTCAACTCACTGCGGCCTCCAACCTCCCAGGCTCAAGCAATCCTCCCCACCTTAGT 11339
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                                                                                                                                                                                                                    TTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTG-TCTTAAACTCCTGGCTTCAA 3343
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                         TGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGCTCAAGGGATCTGCTGACCTCAGC
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; Sequence 11293, Application US/09949016
; Patent No. 681239
; GENERAL INFORMATION:
    APPLICANT: VENTER, J. Craig et al.
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TILLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TILLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR PELING DATE: 2000-10-20
; PRIOR PELING DATE: 2000-10-09
; PRIOR PELING DATE: 2000-10-09
; PRIOR PELING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
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US-09-949-016-14293
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Matches 844; Conservative
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US-09-949-016-14293/c
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ORGANISM: Human
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Sequence 15700, Application US/09949016

Fatent No. 6812339

GENERAL INFORMATION:
FAREAL INFORMATION:
FOLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION NUMBER: 05/241, 755

FRIOR FILING DATE: 2000-10-20

FRIOR APPLICATION NUMBER: 60/231, 498

FRIOR FILING DATE: 2000-10-03

FRIOR FILING DATE: 2000-10-03

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Pred. No. 1.3e-80;
1; Mismatches 480;
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Matches 911; Conservative
                        US-09-949-016-15700/c
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ORGANISM: Human
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GAGACAGAGTCTCACTTCATCACCTCCACTCCGTTCAGCTCACTGCAACCTCTGCCTCC
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4449 3431

3332

3152 4687 3212 4627

Gaps

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; LOCATION: (I)..(118999)
; OTHER INFORMATION: Homo sapiens genomic DNA, chromosome 22q11.2, clone KB226F1, Genb
; OTHER INFORMATION: ank accession number AP000351.2 GI:5420485
US-09-791-105B-32
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PRIOR APPLICATION NUMBER: EP20000103844 20000224
PRIOR FILING DATE: 2000-02-24
NUMBER OF SEQ ID NOS: 36
SOFTWARE: Patentin version 3.1
SEQ ID NO 32
LENGTH: 118999
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                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: gene
LOCATION: (1)..(118999)
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APPLICANT: EPIDAUROS Biotechnologie AG
APPLICANT: EPIDAUROS Biotechnologie AG
TITLE OF INVENTION: Method for detecting the
TITLE OF INVENTION: deletion mutant
FILE REFERENCE: US 09,791.105
CURRENT APPLICATION NUMBER: US/09/791,105B
CURRENT FILING DATE: 2001-02-22
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US-09-791-105B-32/C
; Sequence 32, Application US/09791105B
; Patent No. 6723508
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Sequence 15970, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION OF SECOND 10-0-04-14

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NUMBER OF SEC ID NOS: 207012

SEQUING FILING DATE: 1000-09-08

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Pred. No. 3.1e-80;
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Best Local Similarity 56.9
Matches 927; Conservative
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Sequence 13725, Application US/09949016

Sequence 13725, Application US/09949016

Retent No. 681239

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF ILLING DATE: 2000-04-14

CURRENT FILING DATE: 2000-10-20

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 13725

LENGTH: 100468

TYPE: DNA

ORGANISM: Human
                                  AGTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCATGCCAATCTC 15494
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                                                                                               TGACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACCACGCCTGGCTAATTA
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            AAGTCCAAG----GTGGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 7.9%; Score 396.4; DB 3; Best Local Similarity 59.4%; Pred. No. 3.7e-80; Matches 872; Conservative 1; Mismatches 522;
                                                                                                                                                                                                                                                                                                       ATCTCAAAAAATAAATAAATAAATAA 4530
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OTHER INFORMATION: n = A,T,C or
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                                                    CTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCGCCCGACACCACGCCCGGCTAATTT 15554
                                                                                                                  TTTGTTTTTTTTTCAGTAGAGGGGGTTTCACTGTGTTAGCCAGGATGGTCTCAATCT 15614
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15435 AGTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCATGCCAATCTC 15499
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                                 TGACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTA 3275
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                                                                                                                                                                                                                                 CAGAACAGGGATTACTGCCTATTTTCTTCTTTTTTTTTGAGACAGAGTCTCACTTCAT 3512
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                                                                                                   3276 AAAAATTTTTTT---GTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACT
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Length 100468;

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Sequence 16487, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 06/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
                                                       ----GAAGTCATCCCC 2646
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                        GTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCG-ACACAGCGAGACTCT
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                                                                                                                                                                  4503 ATCTCAAAAAAATAAATAAATAA
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; ORGANISM: Human
US-09-949-016-16487
                                                                                                                                                                                                                                                                   RESULT 39
US-09-949-016-16487
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APPLICANT: Zakut, Haim
APPLICANT: Shani, Moshe
TITLE OF INVENTION: TRANSGENIC ANIMAL ASSAY SYSTEM FOR
TITLE OF INVENTION: ATTI-CHOLINESTERASE SUBSTNACES
OCRRESPONDENCE ADDRESS: 7
CORRESPONDENCE ADDRESS: 7
ADDRESSEE: KANN & ASSOCIATES
STREET: 30500 No. 6022183thwestern Highway, Suite 410
CITY: Farmington Hills
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CAGCACACGACTCTGCGGAGAGCTGCCTCCGGGC-CTTGTGGCATAAGGTGAGGCTGGG 6872
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                                                                                                                                                                                                         GCCAAATTGCTATTAAGCCCATCCATACATTCTTTGTTTTGAGATATGTATTTTTCAGCT
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                                                                 AATGTGGGGGGGGGGAGGGATTCCCCAAAGGTGTTCAGGCACCAGTCTTCTTT
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LOCATION: compl
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LOCATION:
STATE: Michigan

COUNTRY: U.S.
ZIP: 48334
COMPUTER EADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/814,095
FILING DATE:
CLASSIFICATION: 80
ATTORNEY/AGENT INFORMATION:
NAME: Montgomery, Ilene N.
REGISTRATION NUMBER: 2391.00066
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 35060 base pairs
TYPE: MOLDIO CALL
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LOCATION: 24090..25177
LIDENTIFICATION METHOD: experimental
OTHER INFORMATION: /function= "(translation start:
OTHER INFORMATION: /4110)"
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: promoter
LOCATION: 4089..22464
OTHER INFORMATION: /function= "ACHE Promotor"
OTHER INFORMATION: /standard_name= "ACHE Promotor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "Cosmid including ACHE
DESCRIPTION: promotor, ACHE gene and ARS gene"
HYPOTHETICAL: NO
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LOCATION: 22465..22537
OTHER INFORMATION: /function= "non-translated"
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 1
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LOCATION: 25524..26009
IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= Experimental
OTHER INFORMATION: /evidence= "ACHE"
OTHER INFORMATION: /gene= "ACHE"
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NAME/KEY: exon
NAME/KEY: exon
1005-12734
1005NTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
FEATURE:
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LOCATION: 27255..28007
LDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
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ORIGINAL SOURCE:
ORGANISM: Homo sapiens
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 7422
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LOCATION: complement (34528..34895)
OTHER INFORMATION: /function= "arsenite resistance OTHER INFORMATION: gene"
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 1
                                                                                                                NAME/KEY: exon
LOCATION: 28008..28129
IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
FRATURE:
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 5
FEATURE:
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LOCATION: complement (31131..31284)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 11
FEATURE:
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 5
FBATURE:
NAME/KEY: terminator
LOCATION: 27385..27387
FBATURE:
FBATURE:
LOCATION: 28008..28129
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LOCATION: complement (33779..33963)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 3
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LOCATION: complement (33493..33591)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 4
FEATURE:
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LOCATION: complement (32959..33094)
OCHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 6
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 2
FEATURE:
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LOCATION: complement (32386..32468)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 8
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 7
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 9
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 10
FEATURE:
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28129..28131
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Sequence 1734, Application US/09949016

Parent No. 6812339
GRERAL INFORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
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                ACTGTGCCTGGCCGATTACTGTCTATTTTTTTTTTGCTATATCCCCAGATCTAGAGCAG 3808
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                                                                                     TGTCTGACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATAAAC
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US-09-949-016-17394/c
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Pred. No. 2.8e-80;
1; Mismatches 561; Indels
                                                                FEATURE:
NAME/KEY: exon
LOCATION: complement (30470..30626)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 13
FEATURE:
NAME/KEY: exon
LOCATION: complement (30187..30274)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 14
FEATURE:
NAME/KEY: exon
                                                                                                                                                                                                                                                                                                                                     FEATURE:
NAME/KEY: exon
LOCATION: complement (29664..29856)
OTHER INFORMATION: /gene= "ARS"
US-08-814-095-7
                                                                                                                                                                                                                                                                                   LOCATION: complement (29945..30073)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 15
                  (30816..31011)
NAME/KEY: exon
LOCATION: complement (30816..3:
THER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 12
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Matches 858; Conservative
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Sequence 17395, Application US/09949016

Sequence 17395, Application US/09949016

Sequence 17395, Application US/09949016

Setent No. 6812339

GENERAL INFORMATION:

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR PLING DATE: 2000-10-20

PRIOR PLING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NOS: 207012

SEQ ID NO 17395-
                                                                                                                                                                                           21187 ACTACATGGAAAGTTGGATCTGTAAAAAGGAAAAGCATTTGAAAAGGTAAACATTTGAGT 21128
                                                                                                                                                                                                                                                                                                                                    21067 GCAAACAGACATAAAACAGATGACAACAGGCCAGGCGCAGTGGCTCATGCCTGTAATCCC 21008
                                                                                                                        TTTGGGTTTTTTTTTTTTTTTAGACAGGGGTCTTGCTCTGTCACCCAGGCATGAG 3157
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                                                    21307 TTTAGGATTCCACACCCAGTAAAACAATCTTTCAAAATGGAGACTTTATCAGACATAGAA
                                                                                     TAA-----TATGGCTTAATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCAAA
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                     CATATTGCCTCAAACCTTTATTGTTACTGTTTTTTCATTGTTACTATTTTAGTCACTGAA
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Pred. No. 1.4e-79;
1; Mismatches 554;
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Best Local Similarity 59.1%;
Matches 882; Conservative 1
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US-09-949-016-17395/c
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; ORGANISM: Human
US-09-949-016-17395
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21783 TACTCTGTTGCCCAGGCTGGAGTGTAGTGGCAAGATCTTGGCTCATGGCAACCTCCGCCT
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                                                                                                                                                                                                                                                                                   22191 TTTTGTTTTTCATTTTTTGTCTTTTTGAGATGGAGTCTTGCTCTGTTGCCCCAGG-----
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                                                                                                                                                                           Length 145241
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                                                                                                                                                                           Score 394.2; DB 3; Length
Pred. No. 1.4e-79;
1; Mismatches 554; Indels
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version SEQ ID NO 17394
LENGTH: 145241
                                                                                                                                                                         7.9%;
                                                                                                                                                                           Query Match
Best Local Similarity 59.1
Matches 882; Conservative
                                                                                                                        ORGANISM: Human
US-09-949-016-17394
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RESULT 43

US-09-949-016-16587/c

Settle 16587, Application US/09949016

Settle No. 681239

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REPERENCE: CLOOL307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/21,758

PRIOR PLILNG DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: PSELSEQ for Windows Version 4.0

SEQ ID NO 16587

LENTH: 55135
                                                                                                                                GTCAATATGGTGAAACCCTATCTCTACTAAAATACAAAATTAGCTGGGTGTAGTGATG 4377
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                                       gcagaggttgcagtgagccgagatcccaccactccagcctgggcgacacacaag
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                                                                      AGTACTTTGGAAGTCCAAGGTGGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTG
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Pred. No. 9.1e-79;
1; Mismatches 498;
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870; Conserv
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US-09-949-016-16587
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                                                                                                          ACACCCAGCCTGGACCTCTTTTTTTTTTATCCAAAGCAATTTATGCTGAAGGAATAGT 21844
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                                                                                       ACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAA
                                                                                                                                                 3278 AAAATTTTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGG
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                                               --CAGTGGTGCAATCTCAGCTCATTGCAAGCTCCACCTCCCAGGTTCAAGTGATTCTTCT
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2191 TTTTGTTTTTCATTTTTTGTCTTTTTGAGATGGAGTCTTGCTCTTGTTGCCCAGG--
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; Sequence 12961, Application US/09949016
; Pactent No. 681233
; GENERAL INFORMATION:
    APPLICANT: VENTER, J. Craig et al.
    TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-10-20
; PRIOR PELICATION NUMBER: 60/241,755
; PRIOR PELICATION NUMBER: 60/241,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-10-03
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12961
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60.6%; Pred. No. 8.4e-79;
cive 1; Mismatches 505;
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Best Local Similarity 60.6
Matches 872; Conservative
                                                                                                  T 4528
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; ORGANISM: Human
US-09-949-016-12961
                                                                                                                                                                                                    RESULT 44
US-09-949-016-12961
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                                         CCACCATGTGCGGCTACTTTCTTTTACATTCCATTTCCCATAGAATGTAAGATCCA 3452
                                                                                                                     CCTCAAGTGATCTGCCTGGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACT 3751
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CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR PLING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARRE: FASESEG FOR Windows Version 4.

; TYPE: DNA ; ORGANISM: Human US-09-949-016-12268

30536

LENGTH:

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-AGAGAATTGCTTGAACCTGGGGGGGGGGGTGTTGTAGTGAGCCAAGATCATGCCACTGTA 23166
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                                                                                      TGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGA
                                                         TAGAGACGGGTTTCTCCATGTTGGTCAGGCTGGTCTCGAACTCCCGACCTCAGGTGATC
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Length 30536;
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                                                                    3; Mismatches 936;
DB 3;
7.8%; Score 389.2; DB 33.6%; Pred. No. 9.6e-79;
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                                   Best Local Similarity 53.6
Matches 1253, Conservative
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Sequence 12268, Application US/09949016

Batent No. 6812319
GEBREAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CLO01307
CURRENT APPLICATION NUMBER: US/09/949,016

-09-949-016-12268/c

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US-09-949-016-16508, Application US/09949016

Sequence 16508, Application US/09949016

Sequence 16508, Application US/09949016

SEQUENCE NO. 6812339

GENERAL INCORMATION:

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT FILING DATE: 2000-04-14

PRIOR PAPLICATION NUMBER: 60/241,755

PRIOR PAPLICATION NUMBER: 60/231,768

PRIOR PELING DATE: 2000-10-20

PRIOR PELING DATE: 2000-10-09

PRIOR PELING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE FASISEE OF Windows Version 4.0

SEQ ID NO 16508
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                                                          25269 CATÁGTÁAGACTGCÁTCTCTÁCÁAAAACÁAÁAÁCCTTATTCAAÁAACATTTCCTGCÁTGC 25210
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                                                                                                                                                                                                                                                                                          TCAGGAGTTCGAGACCAGCTTGGCCAACATGATAAAAACCCCGTCTCTACTAAAAATAC-A 25031
                                                                                                                                                                                                                                                                                                                                                                          25030 AAATTAGCTGGACATGGTGACACACGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGGAG 24971
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                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTACTGCACT 4475
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4176 CAAGAAACCTGCATTAGAGGATGTTTGTTCATATTAAAATTAACTCAGTTGGGCAC
                                                                                                                                          TTCCTTTGTGACACACTGGAGAAAGCACTTTTCATAAATGAGTTTGTGGGCCAGATGT
                                                                                                                                                                                                                                                                                                                                                  AAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GAGTTGGAGGT
                     AGAAATACACACACACACACACTCACACACACTTTTTTTAATGTTTGCAACTAAGA
                                                                                                                                                                                                                                                                  TGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGCCGAGGCGGGCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 389.2; DB 3; Length:
Pred. No. 9.6e-79;
3; Mismatches 936; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAACCCCAGCTACTTGGGAGACT--
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 53.6
Matches 1253; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-16508
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26346 AGCCTCCCAAAGTGCTGGGATGACAGGCGTGAGCCACTGCGCCCAGCCGAGATTTGTCAT 26287
                                                                                                                                                                                                                                                                                        CCCAAGTAGCTGGGACTACGAGCGTGCACCACGCCTGGCTAATTAAAAAATTTTTT 3287
                                                                                                                                                                                                                                                                                                                                                                        3288 TGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAA 3347
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCCTATTTTCTTCCTTTCTTTTTGAGACAGAGTCTCACTTCATCACCTCAACCTCCGT 3527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3646 GAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCTG 3705
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                                                                                                                                                                                                                                                                                                                16286 icitaacaagcicccaggggaigccaatactgtcagttgggaccacacttgatttttt
                                                                                                                      3108 TTTTTGTTGTTGTTTTAGAGACAGGGTCTTGCTCTGTCACCCAGGCATGAGCACAGAGTGGTG
                                                                                                                                                                                                                              86166 GGTTCTCGGCTCAATGCAACCTCCGCCTCTGGGTTCAAGTGATTCTTGTGCCTCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25907 TTATTTTGAGATAGGGTCTCACTGTTGCCCAGGCTGGAGTGCAATGGCACAATC----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3936 TITCACTIATCACCTIGITATGACTITITCATATIGCCTCAAACCTITATIGITACTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25432 ACTGACTCTAGGTGGTTTCAGGTTCCTAGCAAAGTGGCAAACACCTTGAGCAAAAACTT
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                                                                                                                                                                                                      3168 CAACCATAGGTCACTGCAGGCTCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGC----
                                        TTTGCCCAAGATCACACACCTTGTAAGTGGTGACAGTTTGG
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| 26945 TAATCCTAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGTCAGAGGT 26886 | 2487 TTCAGTGAGCCAAGGTCGTGTCACTGCTGCCTGGGTAAC-AGAGCAACTCTGTCT 2545 |     | 26825 CTCAAAAAAAAAAAAAAAAAAAAACCTGATTTAGACCAACTGCCTCGTTTTACAGATAGA 26766 | 2606 TAGGATCATTICTCCTGAAGCATCTTGGCGAAGTCATCCCCACCTGTTCCTGAGAGTGGG 2665 | 26765 GAGGGTGCAGCCTAGAGATCAGCTCCAGGTCATCCAGGAGGTTAGACTCTTTCCTCC 26706 | CAGGIGAGGGGACCTATIGCICIGCACTIACICCTAICTCAGGGGGGGGCGCCCACTIT |        |        | GCAGATTCTGATTTGGTAGGTTGCAGGAAGCCTGCGATTTGTTATTCTTGTTTGT | 2780 GCTGTAAATTTCTGCTGGACANMCCGTACACCCACCTATTCATACTGGGCTCTGGCT 2839 2658 TOTTTCACAATTCACTAATTCACAATTCACAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTCAAATTC | CGGCAATCACCTGTAGCAGTATATCCCTTCATCGCCT | 26525 TCACTGCAACCTCTGCCTTTCCGGTTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGC 26466 | 2882 ATGAATTCTAGTTGGTTCTCAGTAGGCCGGGGGAAATAATAGTAACAACAGCCATGATT 2941 | 26465 IGGGATTACAGGCAIGTGCCACTAIGCTAAITTTGTATTTTAGTAGAA-CAGG 26407 | 2942 TAGTGTTAATTTTCTTGGTTCTGGGCAGTGTCTCCTTTAATCCTCAGAACACACTATGG 3001 | 26406 GTTTCTCCATGTTGGTCAGGCTGGTCTTGAACTCCTGACCTCAGGTGATCTGCCCACCTC 26347 | 3002 GATAGGTACAATTATCCTCACTTAACAGAAAACTGAGGCTCAGAAGGCTGAGGTA 3061 | 26346 AGCCTCCCAAGTGCTGGGATGACAGGCGTGAGCCACCGCCCAGCCGAGATTTGTCAT 26287 | 3062 TITGCCCAAGATCACACACACTTGTAAGTGGTGACAGTTTGGGTTTT 3107 | 26286 icitaacaadercccaggegargccaatacigrcagitgegaccacactrgattrifit 26227 | 3108 TTTTGTTGTTGTTGTTGAGAGAGGTCTTGCTCTGTCACCCAGGCATGAGCACAGGGTG 3167 | 26226 GTTTTTGTTTTTTTGAGAGAGGGTCTCACTCTGTTCTAGGCTGGAGTGCAGTGGCA 26167 | 3168 CAACCATAGGTCACTGCAGCCTCCTGAGCGTCAAGGGATCTGCTGACCTCAGCCT 3227 | 26166 GGTTĆTCGGCTĆAATGČAAČČTČCGCCTĆČTĞGĞTTČAAĞTĞATTCTTGTGCCTÇAĞCČT 26107 | CCCAAGTAGCTGGGACTACGAGCGTGCACCCACGCCTGGCTAATTAAAAAATTTTT | CCCGAGTAGCTGGGATTACAGGCTTGAGTTACCATGCCTGGCTAATTTTTTTT | TGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGGAA | -GIAGAGACGAGGITICACCATGITGCCGAGACTGGGTCTCCAACTCGGGCCTCAATTGA | 3348 TCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCATGTGGGGCT 3407  1 | ACTIATITCTITACATICCATCTITCCAATAGAATGTAAGATCCACAGAACAGGGATTAC | 25929 TGTTTTTATTATTTTT | 3468 IGCCIATTITCTITCTITITGAGACAGAGTCTCACTTCATCACCTCAGCTCCGT 3527 | 25907 Tratitilgagaiadegaicicacignteccagectegaeigearegealaate 25853 |
| q                                                                        | è 8                                                               | ò   | qq                                                                       | ò                                                                      | QQ                                                                    | ò                                                           | g<br>G | ò      | ል                                                       | 8 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8 8                                   | Ω                                                                         | ò                                                                     | q                                                                 | ò                                                                     | đ                                                                        | ò                                                                 | g                                                                     | ò                                                         | д                                                                       | ò                                                                    | q                                                                    | ò                                                                 | q                                                                        | 8 1                                                      | å                                                     | 8                                                            | <u> </u>                                                     | දි දි                                                                     | ò                                                            | · 유                    | ò                                                                | 업                                                                  |

| λ'n      | 3528       | TCAGCTCACTGCAACCTCTCCCGGGTTCAAGYGATTCTCCTGCCTAAGCCTCCTGA 3587                                                            |    |
|----------|------------|--------------------------------------------------------------------------------------------------------------------------|----|
| q        | 25852      | ATGCTCCCTGCAGCCTCAAACTCCTGGGATCAACTGATCCTCCCACCTCAGCCTTCCAA 25793                                                        | m  |
| ò        | 3588       | GTAGCTGGAATTACAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTAGCA 3645                                                          |    |
| ар       | 25792      | gractiggactacagarggaaacaccacgrccractaartritaaaaaatgrtrigta 25733                                                         | 6  |
| ò        | 64         | 705                                                                                                                      |    |
| g<br>G   | 25732      | 256                                                                                                                      | m  |
| ò 1      | 370        | CCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGC 3760  CTGCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGC 3760 | ~  |
| g (      | , נ<br>ו ם | 1 0                                                                                                                      | ,  |
| ·<br>참 옵 | 25612      | CGATTACTGTTATTCTTTATTGTTGCTATCTCCCAGATCTAGAGCAGGGGGGGG                                                                   | m  |
| ò        | 3818       | TATAGTAGGTGCTCAATAAATAATTGATGAAAGCCTAGATATAAACTTTCTTT                                                                    |    |
| qq       | 25552      | CCTGGTAAGTGATCACTGTAAACTTCTCAATGGCAAGGACAGGCTCTTGTTCATTTATGT 25493                                                       | ~  |
| ò        | 3878       | CTTTTTTTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTT 3935                                                          |    |
| q        | 25492      | GCCCCTCAACCACCTACCACAGTTCCCGGCACACAGTGAGGGCTTAATTAA                                                                      | m  |
| λ̈́o     | 3936       | TITCACTIAICACCITGITAIGACTITITCATATIGCCICAAACCITIAITGITACIGII 3995                                                        |    |
| qq       | 25432      | ACTGACTCTAGGTGGTTTCAGGTTCCTAGCAAGTGGCAAACACCCTTGAGCAAAAACTT 25373                                                        | ω. |
| λ̈́o     | 3996       | TITICATIGITACIATITIAGICACIGAATAATATGCCTIAATITGCTTATACATCCTCC 4055                                                        |    |
| qg       | 25372      | gircaaggcigggakagakactcaigcciaigaicccagcactirggaaggcigaggg 25313                                                         | 6  |
| λ        | 4056       | TGCTCCACTITAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAG 4115                                                        |    |
| qq       | 25312      | GEAGGACTGCTTGAGCCCAGGAGTTTGAGACCTG                                                                                       | 0  |
| ò        | 4116       | AGAAATACACACACACACACACCACACAGATTTTTTTAATGTTTGCAACTAAGA 4175                                                              |    |
| q        | 25269      | CATAGTAAGACTGCATCTCTACAAAAACAAAACCTTATTCAAAACATTTCCTGCATGC 25210                                                         | 0  |
| ολ       | 4176       | CAAGAAACCTGCATTAGGGATGTTTGTTCATATTAAAAATAACTCAGTTGGGCAC 4235                                                             |    |
| q        | 25209      | TTCCTTTGTGACAGACACTGGAGAAAGCACTTTTCATAAATGAGTTTGTGGGCCAGATGT 25150                                                       | 0  |
| à        | 4236       | AGIGACICOAGCCIGTAACCACAGTACITIGGAAGTCCAAGGIGGGTGGATCACITGAGG 4295                                                        |    |
| QQ       | 25149      | GGTGGCTCATGCCTGTAATCACAGCACTTTGGGAGGCCGAGGCAGGC                                                                          | 0  |
| λ        | 4296       | TGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAATACAA 4355                                                         |    |
| qa       | 25089      | TCAGGAGTTCGAGACTAGGCCAACATGATAAAACCCCGTCTCTACTAAAAATAC-A 25031                                                           | н  |
| λ        | 4356       | AAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAA 4415                                                        |    |
| qq       | 25030      | AAATTAGCTGGACATGGTGACACACGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAG 24971                                                       | н  |
| δλ       | 4416       | GAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACTGCAT 4475                                                      |    |
| QQ       | 24970      | GAGAATGGCTTGAACCTGGGAGGCGAGGCTACAGTGAGCCAAGATCATGCCACTGCACT 24911                                                        | -  |
| δ        | 4476       |                                                                                                                          |    |
| qq       | 24910      | ccacccigecicacaearcaeacierercicaaaaraaaraaaaraaa                                                                         |    |

EBSULT 47 1S-09-949-016-12232/c Sequence 12232, Application US/09949016

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GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,756
PRIOR APPLICATION NUMBER: 60/231,768
PRIOR APPLICATION NUMBER: 60/231,768
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-10-03
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12.09-949-016-17611/c
; Sequence 17611, Application US/09949016
; Patent No. 6812339
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APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISBASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISBASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISBASE, METHODS OF DETECTION AND USES THEREOF;
CURRENT APPLICATION NUMBER: 05/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR PLING DATE: 2000-10-03
PRIOR PLING DATE: 2000-10-03
PRIOR PLING DATE: 2000-10-03
PRIOR PLING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SEQ ID NO 12232
LENGTH: 58593
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Pred. No. 1.4e-78;
1; Mismatches 516; Indels 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LOCATION: (1) ... (58593)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-12232
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Best Local Similarity 58.8%;
Matches 840; Conservative
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sequence 17363, Application US/09949016

parent No. 6812339

GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CL001307
CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR APPLICATION NUMBER: 60/231,498

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

LUMBER OF SEQ ID NOS: 207012
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                   TGTTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCA
                                                     3385 ACTAGC---TTCAATTCAGTTAAACATTTACTGAATCTCCACCATGTAGGCACTGTGCCT
                                                                                          CTITAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAATA
                                                                                                                          CCTTACAGAGATATAAAAGAGAGAGAGTTTCTGTCTTCAAGGACATTATACATT
                                                                                                                                                              CACACACACACACACACACACACACACAGTTTTTTTTTAATGTTTGCAACTAAGACAAGAAA
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Pred. No. 1.2e-78;
1; Mismatches 515;
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Matches 869; Conservative
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US-09-949-016-17363
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US-09-949-016-17363
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                                                                                                                                                                                    Score 388.6; DB 3;
Pred. No. 1.1e-78;
1; Mismatches 560;
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; SEQ ID NO 17611
; LENGTH: 19310
; TYPE: DNA
; ORGANISM: Human
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (1)...(19310)
; OTHER INFORMATION: n = A,T,C or US-09-949-016-17611
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Best Local Similarity
Matches 849; Conserv
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US-09-949-016-12255/C

Sequence 12255, Application US/09949016

Sequence 12255, Application US/09949016

Patent No. 6812339

GENERAL INPORMATION:

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT PRILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,756

PRIOR PELING DATE: 2000-10-03

PRIOR PELING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

SPRIOR FILING DATE: 2000-09-08

SOFTWARE: PASEEG for Windows Version 4.0
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                       GAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAA
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Pred. No. 1.7e-78;
1; Mismatches 560;
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OTHER INFORMATION: n = A,T,C or
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Matches 849; Conservative
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TYPE: DNA
ORGANISW: Human
FEATURE:
NAME/KEY: misc_feature
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1655 ACACTACCTTGACTCACTGCAGCATCTGCCTCCCGGGTTCCAGTGATTCTCCTGCCTCAG 4714
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Sequence 15316, Application US/09949016

Sequence 15316, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:

PAPLICATT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

TILE REFERENCE: CL001307

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NUMBER OF SEQ ID NOS: 207012

SEQUENCE: SEQUENCE: SOURCE SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SEQUENCE: SE
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US-09-949-016-18316
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RESULT 52
US-09-949-016-16115
Sequence 16115, Application US/09949016
Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.

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TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR PEDLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR APPLICATION NUMBER: 60/237,468
PRIOR APPLICATION NUMBER: 60/237,498
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-09-06
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FREESEQ for Windows Version 4.0
SEQ ID NO 16115
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Pred. No. 8.6e-78;
1; Mismatches 510;
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Best Local Similarity 59.1%;
Matches 848; Conservative
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                                         Length 17704;
                                                                      61;
                                                                      Indels
                                         Score 384.8; DB 3;
Pred. No. 7.7e-78;
1; Mismatches 538;
n = A, T, C \text{ or }
                                           7.7%;
                                           Query Match
Best Local Similarity 59.7
Matches 888; Conservative
 ; OTHER INFORMATION:
US-09-949-016-14878
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APPLICANT: VERYER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CLO01307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FASTSEQ for Windows Version 4.0

LENGTH: 17704
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                                                          AAATTCTAGAATAACATCACTTCTTGCTGCCTGCTAATATTATTGAATATTTAGGGCTTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(17704)
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US-09-949-016-14878/c
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ORGANISM: Human
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GENERAL INFORMATION

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 13010

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                                CAAATCTGATGAAAGCTATGAACCC----TCTCCCCAGAGAAATACACACACACACACACAC
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Matches 855; Conservative
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Sequence 14122, Application US/09949016

Sequence 14122, Application US/09949016

Sequence 14122, Application US/09949016

Sequence 14122, Application US/09949016

SEDENCAL INFORMATION:

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THERE TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THERE FILE REFERENCE: CLOO1307

CURRENT APPLICATION NUMBER: 00/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SSOTIMARE: FRANCESQ for Windows Version 4.0

LENGTH: 194933
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                                 AATAC - - AAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGG
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Pred. No. 4.7e-77;
1; Mismatches 487;
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OTHER INFORMATION: n = A,T,C or US-09-949-016-14172
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Best Local Similarity 59.6%;
Matches 859; Conservative
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                                                                        41482 CCTATAATCCCAGCACTTTGGGAGGCTGAGGTGGGAGGATCACTTGAGCTCAGGAGTTTG
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US-09-949-016-15786/C
Sequence 15786, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
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                                                                                                                                                     Sequence 13025, Application US/09949016
Sequence 13025, Application US/09949016
GENERAL INFORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUWAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR PAPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
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OTHER INFORMATION: n = A,T,C
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US-09-949-016-13025
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US-09-949-016-13025
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q ID NO 13025
LENGTH: 102053
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Sequence 1213, Application US/09949016
Patent No. 681239
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-30
PRIOR PILING DATE: 2000-10-30
PRIOR PILING DATE: 2000-10-03
PRIOR PILING DATE: 2000-09-08
   7183 GTTGGAGACCAGCCTGCCCAACATGGTGAGACCTCATCTCTGCTAAAAATACAAAAATT 7124
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US-09-949-016-12153
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APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT PILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/241,756
PRIOR PLING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SEQ ID NO 15786
LENGTH: 35629
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Pred. No. 4.1e-77;
1; Mismatches 494;
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Conservative
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; OTHER INFORMATION: n = A,T,C
US-09-949-016-15786
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Best Local Similarity
Matches 870; Conserv
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ORGANISM: Human
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Sequence 1531, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

TITLE OF INVENTION: WINDER: 2000-04-14

CURRENT FILING DATE: 2000-10-20

PRIOR PELING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-10-03

PRIOR PLILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

NUMBER OF SEQ ID NOS: 207012

SEQ ID NOS: 207012

SEQ ID NO 15551
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i OTHER INFORMATION: n = A,T,C or US-09-949-016-15351
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ORGANISM: Human
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NAME/KEY: misc_feature
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                                                                                                                                                                                                                                                                                                       Score 381; DB 3; Length 23569;
Pred. No. 6.5e-77;
1; Mismatches 476; Indels 116;
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12153
LENGTH: 23569
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                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (1)...(23569)
...OTHER INFORMATION: n = A,T,C
US-09-949-016-12133
                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 60.3%;
Matches 902; Conservative
                                                                                                                          ORGANISM: Human
FEATURE:
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Sequence 12066, Application US/09949016
Fatent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1307
CURRENT FILING DATE: 2000-04-14
CURRENT FILING DATE: 2000-10-20
FRIOR APPLICATION NUMBER: 60/237,768
FRIOR FILING DATE: 2000-10-03
FRIOR FILING DATE: 2000-10-03
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 Score 380.2; DB 3;
Pred. No. 1.4e-76;
0; Mismatches 518;
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Best Local Similarity 59.2
Matches 880; Conservative
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US-09-949-016-12068
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; ORGANISM: Human
US-09-949-016-12068
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Score 381, DB 3; Length 23574;
Pred. No. 6.5e-77;
1; Mismatches 476; Indels 116;
Query Match
Best Local Similarity 60.3%;
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| Db 47084 CAAGACCAGCCTGGCC  Qy 4365 GGGTGTAGTGATGCAT  Db 47144 GGGTGTGGTAGTAGGAGGAGGAGGAGGAGGAGGAGGAGGA                                                                                                                                                                                                                                                                                                  | Search completed: May 12, 2006 Job time: 686 secs      |
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| 3284 TTTTGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAA 3343 46030 TTTTTGTAGAGATGGGGTTTCACCATGTTGCCCAGGCTTGTCTCAAACTCCTGAGCTAA 46089 3344 GCATCCTCCTCTTGGCATCCCAAAGTGCTGGGATTACAGGGTGAGCCACCATGTGC 3403 46090 GTGATCCTCCTCTTGGCATCCCAAAGTGCTGGGATTACAGGGCTGAGCCACCATGTGC 3403 146090 GTGATCCTCCCGCCTTGGCATCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCACCGCACCGCACCGCACCGCACCGCACCGCACCGCACCGCACCGCACCAC | 1979   TTCCTTTCTTTTTTGAGACAGAGTCCACTCACTCACCTCACCTCCGT |
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Sequence 148, App Sequence 273, App Sequence 274, App Sequence 2740, Ap Sequence 1099, Ap Sequence 1099, Ap Sequence 1767, App Sequence 1757, App Sequence 175, App Sequence 175, App Sequence 175, App Sequence 64, App Sequence 64, App Sequence 64, App Sequence 64, App Sequence 1730, App Sequence 1750, App

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8 US-10-719-993-6815
8 US-10-741-600-176-76
US-09-744-600-176-76
US-09-744-600-176-76
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Copyright (c) 1993 - 2006 Biocceleration Ltd.
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## ALIGNMENTS

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RESULT 1
US-10-607-806-1

Sequence 1, Application US/10607806

Fublication No. US20050014158A1

GENERAL INFORMATION:

APPLICANT: Adam, Gail Isabel Reid

APPLICANT: Dennisenko, Mikhali F.

APPLICANT: Dennise, Edward

APPLICANT: Cantor, Charles

APPLICANT: REDUCING FAT

TITLE OF INVENTION: THERAPEUTIC METHODS FOR REDUCING FAT

TITLE OF INVENTION: DEPOSITION AND TREATING ASSOCIATED CONDITIONS

FILE REFERENCE: 524592003200
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Best Local Similarity 99.9%; Pred. No. 0;
Matches 5000; Conservative 1; Mismatches
CURRENT APPLICATION NUMBER: US/10/607,806
CURRENT FILING DATE: 2003-06-27
PRIOR PILING DATE: 2002-06-27
NUMBER OF SEQ ID NOS: 78
SOFTWARE: PASLESQ for Windows Version 4.0
LENGTH: 12174
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OTHER INFORMATION: m = A or C
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NAME/KEX: misc feature
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OTHER INFORMATION: r = A or G
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; DOCATION: (11649) ...(11649)
; OTHER INFORMATION: m = A or C
US-10-607-806-1
                                                                                                                                                                                                                                                                                                                          or C
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LOCATION: 436
OTHER INFORMATION: y = C or
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NAME/KEY: misc_feature
LOCATION: 7300
OTHER INFORMATION: m = A or
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LOCATION: 6358
OTHER INFORMATION: y = C
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OTHER INFORMATION: y = C
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LOCATION: (4050)...(4050)
OTHER INFORMATION: m = A
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LOCATION: 4689
OTHER INFORMATION: w = A
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NAME/KEY: misc_feature
LOCATION: 6282
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ORGANISM: Homo sapiens
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| 348                                                                      | 3481 CCTTTCTTTTTGAGACAGAGTCTCACTTCATCACCTCCAACCTCGGTTCAGCTCGCA 3540<br> | m &                                                              | CAAGCGTGCACCACCATGCTTGGCTAATTTTTTGTATTTTTAGCAGAATGGGGTTTTAC 366 [   | 372<br>821                                                     | 378                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | tatatccccagatctagagcagtgtctgacatatagtaggtggtcaataataa 384<br>         | 390<br>839                                                          | 396<br>845                                                                                                              | TITTCATATTGCCTCAAACCTTTATTGTTACTGTTTTTTCATTGTTACTATTTTAGTCAC 402                                                                         | 408<br>857                                                           | 4 6                                                                                                                                            | 4141 CACACACATTTTTTTAATGTTTGCAACTAAGACAAGAAACCTGCATTAGAGGTGTT 4200<br> | T 426<br> <br>  875                                                                                                                                     | 4261 ACTTTGGAAGTCCAAGGTGGGTCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTC 4320<br> | 4321 AATATGGTGAAACCCTATGTCTAAAAATACAAAATTAGGTGGGTG                                                                                  | 4381 GCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAAATTGCTTGAACCTGGGAGGCA 4440<br>                                                                     | 4441 GAGGTTGCAGTGGGCCGAGATCCCACCTCGCTCTGGCCTGGGCGACACAGCGAGACT 4500                                                                      | 1 CTATCTC                                         |
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| OY 2341 AGCGGGGGGATCACTTGAGGTCAGGAGTTCGAGACCTGGCCAACATGGTGAAACC 2400  Dh | 2401 CTGTCTCTACTAAAAATACAAAAATTAGCCGGACATGGGGGGGG                       | 8900 CIGICICATACATACATACATATATAGCCGGGCATGGGGGGCGCGGGCCCCGGGGGGGG | 2521 CCTGGGTAACAGACCTCTGTCTCAAAAAAAAAAAGTGCTTTCAATAATATGATA 258<br> | 2581 AAAGGACTTATATTTTCAAGCCATAGGATCATTTCTCCTGAAGCATCTTGGCG<br> | 2641 ATCCCCACTGTTCCTGAGAGTGGCCAGGTGAGGCTGACTATTGCTCTGCACTTACTC 270 2140 ATCCCCACTGTTCTTGCTAGAGTGGCCAGGTGAGGCTGACTTATTGCTCTGCACTTACTC 270 2140 ATCCCCACTTGAGAGTGCCCAAGAGAGTGAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGTGAAGAGAGTGAAGAGAGTGAAGAGAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG | 2701 CTATCTCAGCTGTCCCCCCCACTTTCCAGCTGCTGCCACACATGACAACTGCTAYGAC 276 1 | 2761 CAGGCCAAGAAGCTGGACAGCTGTAAATTTCTGCTGGACAWWCCGTACACCCCACCTAT 28 | 2821 TCATACTCGTGCTCGGCAATCACTGTAGCAGTAGGTTTATCCCTTGACC 288 7320 TCATACTCGTCTCTGGCTATTCACTGTAGCAGTAGGTTTATCCCTTTGACC 288 | 2881 TATGAATTCTAGTTGGTTCTCAGTAGGCCGGGGGAAATAATAGTAACAACAGCCATGAT 294 7380 TATGAATTCTAGTTGGTTCTCAGTAGCCGGGGGAAATAATAGTAACAACAGCCATGAT 743 | 2941 TTAGTGTTAATTTTCTTGGTTCTGGGCAGTGTCTCCTTTAATCCTCAGAACAACACTATG 30 | 3001 GGATAGGTACANTTATCCTCACTTAACAGATAAGAAAACTGAGGCTCAGAAGGCTGAGCT 30 7.600 GGATAGGTACAATTATCCTCACTTAACAGATAAGAAAACTCAGAAAGGCTCAAAAGGCTGAGCT 30 | 3061 ATTIGCCCAAGATCACAGCTTGTAAGTGGTGACAGTTTGGGTTTTTTTT                 | 3121 TTAGAGACATGATTACACCCAGGCATGAGACACATGATGAACCATAGATGA 1121 TTAGAGACATGATCATTGATCACCCAGGCATGAGAACATGATGATGAACATAGATGATGATGATGATGATGATGATGATGATGATGATG | 3181 CTGCAGCCTCCAAGGCTCAAGGGATCTGCTGACCTCCAGCCTCCCAAGTAGCTGG 324       | 7880 CIGCAGCCICCAACCICCIGAGGGAICIGCIGACCICAGGCCICCCAAGIAGCIGG 773 3241 GACTACGAGCGCGCCACCACGCCTGGCTAATTAAAAAATTTTTTGTAGAGACTGGG 330 | 7740 GACTACGAGCGIGCACCACCACGCTGGGIAAITAAAAAATTITITIGIAGAGACIGGG 7799<br>3301 TCTTACTACGTTGGCCAGGCTTGICTTAAACTCCTGGCTTCAAGCAATCCTCCTACCTTG 336 | 7800 TCTTACTACGITGGCCAGGCTIGICTTAAACTCCTGGCTTCAAGCAATCCTCCTACCTTG 785. 3361 GCATCCCAAAGTGCTGGGATTACAGGGGTGAGCGACCATGTGCGGGTTACTTTTA 342. | .AAAĞTGCTGGGATTACAGGGGTGAGCCACCATGTGCGGCTACTTATTT |

| 10372 TGCCTCAGCCTCCCGAGTAGCTAGGATTACAGGTGCACCCCCCTCCGGCTAATT 10316 974 TTTGTATTTTAATAAAGACGGGTTTCATCGTGTTAGCCAGGATGGTCTCAAG 1033 10315 TTTGTATTTTTAGTAAAGACAGGGTTACTCCATGTTGGTCAGGCTGGTCTCAAATTCCTG 10256 1034 ACCTTGTGATCGCCTGCGCCTCCCCAAAGTGCTGGATTACAGGCTGAGCTGCTCCAAATTCCTG 10256 10255 ACCTTGTGATCGCCTGCCCTCCCCCCCCAAAGTGCTAGGATTACAGGCATGAGCCA 1090 10255 ACCTTGTGACCTTATCATTATTATTATTATTATTACAGGCGTGAGCCACGG 10196 1091 CCGTGCCCGGCCTTATCACATTTATTATTATTATTATTCTCTCCCCACTAGGTTGTAAGC 1150 10195 CCCGGCCAGAGAAAAATCTTTATTATTATTATTATTATTATTATTATTATT | 10135 AAAGGCACAAAATCATTTAGAAAAAAAAAAAAAAAAAAA | 1304 GTTTAAAACTATCTGACCTAGGGAGGCTGAGGAGAAATGGCGTGAACCCG   1356                                                                                        | 9835 CGHGHATTHININININININININININININININININININI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                                             | Db   9360 ATGTTCCATAATTTTTAAAATACATGCTTTAAAGTAGGAAACTAGGTTGGGCATGGTGG 9419     Qy   4921 CTCACGCCTGTATCCCAGCACTTTGGGAGGCCGAGGCAAATGGATCACGTCCGGA 4980 | RESULT 2 US-10-741-600-17681/C Sequence 17681, Application US/10741600 Sequence 17681, Application US/10741600 Publication OF US20050026169A1 GENERAL INFORMATION: TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH TITLE OF INVENTION: MYOCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF FILE REFERENCE: CL001499 CURRENT APPLICATION NUMBER: US/10/741,600 CURRENT PELING DATE: 2003-12-22 NUMBER OF SEQ ID NOS: 73997 SOFTWARE: FASESEQ for Windows Version 4.0 LENGTH: 333811 TYPE: DNA GRANISM: Homo sapiens FRATURE: FRATURE: | DOTHER INFORMATION: 01 - A,T,C or G, or insertion/deletion polymorphism (see Tables 1-0741-600-17681  OUELY MATCH  OUELY MATCH  OUELY MATCH  Best Local Similarity 50.9%; Pred. No. 1.8e-97;  MATCHES 1926; Conservative 3; Mismatches 1650; Indels 203; Gaps 26;  OY 794 ACATTATATATATATATATATATATATAGAGACGAGAGCTGGA 853  OY 794 ACATTATATATATATATATATATATAGAGACGAGAGCTTGCTT |

| 1089 TGGTGACAGTTGGGTTTTTTTTTTTTTTTTAGACAGAGTTTGGTTTGGTTCTGGTTGGT                                                   | 3924 TGCATTCTGCTTATCACCTTGTTATGACTTTTTCATATTGCTCCAAACCTTT 3983 748 CATAATCACAAAACAGCCTTGTATAGACAGAAAATAGATAG                        |
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| 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6                                                                            | 8 8 8 8 8 8 8 8                                                                                                                     |
| 2017 GGACTTGCATATCTGCTAAGGATAACATATTTTCACCTCTTGTCAAATAAACAATATGT  2077 TCCAAGGAGGACCCTGTAAGGATAAATAAATAAATAAAAAAAA | Db 8502 CACCACTCAGCTTATCTTTCTGTAAGGCTAACTCAAGTCAATCTGGCAATTT 8451  2849 CCTGTAGCAGTAACCATTCCTTCGTTGAATTCTAGTTGGTTCTCAGTAGGC 2908  [ |

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12060 AGTATTCCATTTAAGGATGTTCCATAATTTTTAAAATACATGCTTTAAAGTAGAGAAACT 42001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wyeth A APPLICANT: Weth Weth APPLICANT: Weth Watch APPLICANT: Wyeth Watch APPLICANT: Weth Watch APPLICANT: Weth Watch APPLICANT: Twine, Natalie C. APPLICANT: Dorner, Andrew J. APPLICANT: Trepicchio, William L. APPLICANT: Slonim, Donna K. APPLICANT: Slonim, Donna K. APPLICANT: Stover, Jennifer A. TITLE OF INVENTION: METHODS FOR DIAGNOSING RCC AND OTHER SOLID TUMORS FILE REFERENCE: AMAD1080L CURRENT APPLICATION NUMBER: US 60/459,782 PRIOR APPLICATION NUMBER: US 60/459,782 PRIOR PLILING DATE: 2003-11-21 PRIOR PLILING DATE: 2003-6-0-03 PRIOR FILING DATE: 2002-11-21 NUMBER OF SEQ ID NOS: 4904 SOFTWARE: Patentin version 3.2 SEQ ID NO 68 LENGTH: 126990
                                                                                                                 42000 AGGTTGGGCATGGTGGCTCACGCCTGTATCCCAGCACTTTTGGAGGCCCGAGGCAAATGGA
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                                                        4905 AGGTTGGGCATGGTGGCTCACGCCTGTATCCCACGCACTTTGGGAGGCCGAGGCAAATGGA
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8.9%; Score 444.4; DB 7; Length
Best Local Similarity 54.1%; Pred. No. 1.1e-90;
Matches 1225; Conservative 3; Mismatches 987; Indels
                                                                                                                                                                                                        41940 TCACTTGAGGTCCGGAGTTTGAGACCAGCCTGGACAA 41904
                                                                                                                                                                                                                                                                                                                                                                          Sequence 68, Application US/10717597; Publication No. US20040110221A1; GENERAL INFORMATION:
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CORGANISM: Homo sapiens
US-10-717-597-68
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4460
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Publication No. US20040126762A1
GENERAL INFORMATION:
APPLICANT: David W. Morris
APPLICANT: David W. Morris
APPLICANT: Marc S. Malandro
TITLE OF INVENTION: NOVel Compositions and Methods in Cancer FILE REFERENCE: 529452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILING DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SOFTWARE: FastSEQ for Windows Version 4.0
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Pred. No. 8.7e-94;
1; Mismatches 0;
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Matches 456; Conservative
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US-10-322-281-618
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LENGTH: 42360
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; Publication No. US20030143668A1
; GENERAL INFORMATION:
   APPLICANT: SUWA, MAKIKO
; APPLICANT: ARIYAMA, YUTAKA
; APPLICANT: ARIYAMA, YUTAKA
; APPLICANT: ARIYAMA, YUTAKA
; TITLE OF INVENTION NOVEL G PROTEIN-COUPLED REC; FILE REFERENCE: 084335/0152
CURRENT APPLICATION NUMBER: US/10/017,161
CURRENT PILING DATE: 2002-12-18
; RICK APPLICATION NUMBER: 202-12-18
; RICK APPLICATION NUMBER: 2201-66-18
; NUMBER OF SEQ ID NOS: 2430
; SEQ ID NO 1659
LENGTH 58448
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ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: source
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27750 TAAAAATACAAAAATTAGCCGGGCATCGTGGTGGGCGCCTGTAATCCCCAGCTACTTGGG 27691
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                               AGGCCAAGAAGCTGGACAGCTGTAAATTTCTGCTGGACAMMCCGTACACCCACACCTATT 2821
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8.8%; Score 438; DB 6; Length 58448;
Best Local Similarity 50.3%; Pred. No. 2.1e-89;
Matches 1980; Conservative 3; Mismatches 1653; Indels 302;
                                                                                                                                 TEATURE:

NAME/KEY: modified base

COCATION: (32482)...(32581)

COTHER INFORMATION: a, t, c, g, unknown or other

FEATURE:

NAME/KEY: modified base

LOCATION: (41206)...(41305)

OTHER INFORMATION: a, t, c, g, unknown or other

FEATURE:

NAME/KEY: modified base

LOCATION: (50772)...(50871)

OTHER INFORMATION: a, t, c, g, unknown or other

UCCATION: (50772)...(50871)
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                                     NAME/KEY: modified base
LOCATION: (14021)...(14120)
OTHER INFORMATION: a, t, c, g
FEATURE:
NAME/KEY: modified base
LOCATION: (25450)...(25549)
OTHER INFORMATION: a, t, c, g
 NAME/KEY: CDS
LOCATION: (57674)..(58248)
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LOCATION: (50745)...(51037)
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(11245)..(11963)
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(12136)..(12283)
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(16345)..(16400)
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(16922)..(17048)
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3356 TCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCTGCCTCAGCCTCCC 33507

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                           Sequence 676. Application US/1032281
; Publication No. US20040126762A1
; GENERAL INFORMATION:
; APPLICANT: David W. Morris
; APPLICANT: Marc S. Malandro
; TITLE OF INVENTION: Novel Compositions and Methods in Cancer; FILE REFERENCE: 529452001000
; CURRENT APPLICATION NUMBER: US/10/322,281
; CURRENT PILING DATE: 2002-12-17
; NUMBER OF SEQ ID NOS: 866
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 676
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                                                                                                                                                                                                                                                                                                                DB 7;
                                                                                                                                                                                                                                                                                                              Score 434.2; DB 7;
Pred. No. 2.1e-88;
1; Mismatches 559;
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Best Local Similarity 59.7%;
Matches 861; Conservative 1
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                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Homo
US-10-322-281-676
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                  33213 AAGAAAGCAGTGTGTGTGACAACATCAAGTTTTTGTTTTGTTTTGTTTTGTTTTCTTTTCCAAG
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Pred. No. 2.8e-88;
1; Mismatches 525;
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; TYPE: DNA; ORGANISM: Homo sapiens; PRATURE: FARTURE: LOCATION: (1)...(160482); OTHER INFORMATION: n = A,T,C or US-10-087-192-100
                                                                                                                                                                                                                                                              8.7%;
                                                                                                                                                                                                                                                                                         Best Local Similarity 60.2
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   ACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATAAACTTTCTT 3874
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Publication No. US20020182586A1
GENERAL INFORMATION:
FAPLICANT: Boston W.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: AD40122
CURRENT FILING DATE: 2002-03-01
FRIOR PILING DATE: 2000-12-22
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FRIOR FILING DATE: 2000-103-02
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|  | Qy 4056 TGCTCCACTTTAGAAGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCGG 4115 Db 4260 TTAAAAAGTCCTCTGGAATGAGATGAAGGTTAACAGTTACTGAACACAGACCAAAACTAG 4201                        | OY 4116 AGAAATACACACACACACACACACACACACACATTTTTTTT                                | OY 4176 CAAGAAACCIGCATIAGAGGATGTITGTICATATIAATTAAAAATAACTCAGTT 4229          | OY 4230 GGGCACAGTGACTCAAACCACAGTACTTTGGAAGTCCAAGGTGGGTG         | OY 4290 TIGAGGIGAGAAGTICGAGACCAGCCTGGTCAATAIGGIGAAACCCTAICTCTACTAAAA 4349 | OY 4350 ATACAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTGGGAGGCTG 4409 | Qy         4410 AGGCAAGAGAATTGCTTGAACCTGGGAGGCAGGCATGCAGTGAGCCGAGATCC 4463           Db         3900 ACGCAGGAGAATTGTTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCAAGATGGAGTCG 3841 | OY 4464 CACCACTGCACCTGGGCGACACAGGGGACTCTATCTCAAAAAAAA               | OY 4524 AAAATAAAGGATCGGAGAAACAAAACTAATAAG 4558<br>                        | RESULT 8<br>US-10-087-192-844/c                            | Sequence 844, Application US/10087192<br>Publication No. US20020182586A1<br>GENERAL INFORMATION:<br>APPLICANT: Morris, David W. | APPLICANT: Engelhard, Eric K. TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: CANCER FITE DEPENDENTO: 200420000000 | CURRENT FILING DATE: 2002-03-01 | FRIOR AFFLICATION NUMBER: US 09/747,377 PRIOR FILING DATE: 2000-12-22 PRIOR APPLICATION NUMBER: US 09/798.586 |      | SOFIWARK: FASCSEQ IOF WINGOWS VERSION 4.0<br>SEQ ID NO 844<br>LENGTH: 91760 |      | Fablur:<br>NAME/KEY: misc_feature<br>LOCATION: (1)(9176)             | ; OTHER INFORMATION: n = A,T,C or G<br>US-10-087-192-844 | 7%; Score 433.2; DB 5; Length 91760;<br>6%; Pred. No. 3.5e-88; Thals 89. Gare | 906; Conservative 1; Mismacches                                   |

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NAME/KEY: misc_feature
LOCATION: (1)...(38538)
OTHER INPORMATION: n = A,T,C (US-10-322-281-448)
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Matches 879; Conservative
LENGTH: 38538
TYPE: DNA
ORGANISM: Homo sapiens
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Publication No US20040126762A1
GENERAL INPORMATION:
APPLICANT: David W. Morris
TITLE OF INVENTION: Novel Compositions and Met
FILE REFERENCE: 529452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILING DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SEQ ID NO 448
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              ATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTAC
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| Publication No. US20030083283A1
| GENERAL INPORMATION:
| GENERAL INPORMATION:
| APPLICANT: C. Frank Bennett
| APPLICANT: C. Frank Bennett
| TITLE OF INVENTION: ANTISENSE MODULATION OF COREST EXPRESSION
| TITLE REFERENCE: RTS-0297
| CURRENT APPLICATION NUMBER: US/09/920,671
| CURRENT FILING DATE: 2001-08-01
| NUMBER OF SEQ ID NOS: 91
| LENGTH: 139257
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Pred. No. 4.2e-84;
3; Mismatches 948; Indels
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8.3%;
Best Local Similarity 54.0%;
Matches 1222; Conservative
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ORGANISM: Homo sapiens
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NAME/KEY: unsure
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NAME/KEY: unsure
LOCATION: 10445
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US-09-920-671-11
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APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASS.
TITLE OF INVENTION: ALZHEIMER'S DISEASE, MET.
FILE REFERENCE: CLOON496
CURRENT APPLICATION NUMBER: US/10/719,993
CURRENT FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SEQ ID NO 6883
                                                                 ; Sequence 6883, Application US/10719993
; Publication No. US20040265849A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: misc_feature
                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Homo sapiens
                                              RESULT 12
US-10-719-993-6883/c
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LOCATION: (1). T. (187844)
OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-2
WITH DETECTION AND USES THEREOF
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                                                                                                                                                                                                                                                                                  Score 414.2; DB 5;
Pred. No. 1.3e-83;
1; Mismatches 464;
                                                                                                                                                                                         ; OTHER INFORMATION: n = A,T,C or G
US-10-087-192-484
                                                                                                                                                                                                                                                                                        8.3%;
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Best Local Similarity 60.7
Matches 869; Conservative
                     LENGTH: 196686
TYPE: DNA
ORGANIEM: Homo sapiens
FEATURE:
NAME/KEY: misc feature
LOCATION: (1)...(196686)
SEQ ID NO 484
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APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: CANCER.
FILE REFERENCE: 529452000122
CURRENT PILING DATE: 2002-03-01
PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
PRIOR FILING DATE: 2001-03-02
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US-10-087-192-484, Application US/10087192; Publication No. US20020182586A1; GENERAL INFORMATION:
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                                    TGCATTCTGCTTT-TTCACTTATCACCTTGTTATGACTTTTTCATATTGCCTCAAACCTT
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APPLICANT: David W. Morris
APPLICANT: Marc S. Malandro
TITLE OF INVENTION: Novel Compositions and Met
FILE REFERENCE: 529452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILING DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SOFTWARE: FRASESQ for Windows Version 4.0
SEQ ID NO 314
LENTH: 227246
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US-10-322-281-314/c
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Pred. No. 1.3e-81;
1; Mismatches 558;
FEATURE:
NAME/KEX: misc_feature
LOCATION: (1) .. (227246)
OTHER INFORMATION: n = A, T, C or
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Best Local Similarity 59.7
Matches 898; Conservative
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                                                                                                                      TAAAAATAACTCAGTTG------GGCACAGTGACTCAAGCCTGTAACCACAGTACTTTG
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                                                                                                        GAAGTCCAAGGTGGGTGCATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATG
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                                                    CTATGAACCCTCTCCCCAGAGAA----TACACACACACACACACACTCACACACACACTTTT
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Publication No. US20020086810A1
GENERAL INFORMATION:
APPLICANT: GUEGLER, Karl et al
TITLE OF INVENTION: ISOLATED HUMAN PHOSPHODIESTERASE
TITLE OF INVENTION: PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN
TITLE OF INVENTION: PROSPHODIESTERASE PROTEINS, AND USES THEREOF
FILE REFERENCE: CL000972
CURRENT APPLICATION NUMBER: US/09/740,043
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Pred. No. 1.1e-81;
1; Mismatches 545;
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 23639
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Best Local Similarity 59.6%;
Matches 882; Conservative
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LOCATION: (1)...(23639)
OTHER INFORMATION: n = A,T,C
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ORGANISM: Human
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US-09-740-043-3/c
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132967 ATTĆCCTCTGTGAĞTGACACAAĞTTATTTCCTTTČTCAGCACTTCAGTTTTCCTCTGTGT 132908
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                                                                                                                                                                                                                                                                                                                                                                              132667 AGCAAGAATGCAAAAGAAAATAAGAGGAGAAAAAGGGGGACACAGACCATATATCAACAAG 132608
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               2646 CACCTGTTCCTGAGAGTGGCCAGGTGAGGCTGACCTATTGCTCTGCACTTACTCCTATC 2705
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                                                                                              CACTTTGGGAGGTTGAGGCGGGTGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTGAC
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US-10-981-277-44/C
i Sequence 44, Application US/10981277
i Publication No. US20050181389A1
i GENERAL INFORMATION:
APPLICANT: Harris, Cole
i APPLICANT: Harris, Lisa
i TITLE OF INVENTION: Compositions and Methods for Glioma Classification
FILE REFERENCE: 03-968-US
CURRENT PAPLICATION NUMBER: US/10/981,277
CURRENT FILING DATE: 2004-11-03
PRIOR FILING DATE: 2003-11-03
NUMBER OF SEQ ID NOS: 57
SOFTWARE: PatentIn version 3.3
                         TICIAITAGAAAAGGTACGTAGATGCCA---GGTACAGTGGCTCATGCCTGTAATCCCAG
                                                                                                                                                           CAACATGGTGAAACCCCATCCTCTACTAAAATACAAAATTAGCCGGGCGTGGTGGCGC
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                                                               TACTITIGGAAGTCCAAGGTGGGTCGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGT
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Pred. No. 8.3e-81;
3; Mismatches 953; Indels
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ORGANISM: Homo sapiens
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Best Local Similarity
Matches 1221; Conserva
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                                                                                             Gaps
                                                           Length 103574,
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                                                                                           1; Mismatches 478;
                                                              08 9;
                                                              Score 401.8; DB 9
Pred. No. 6.9e-81;
                                                              8.0%;
                                                              Query Match
Best Local Similarity 59.7
Matches 862; Conservative
                  Sapiens
              , ORGANISM: HOMO
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Publication No. US20050181375A1
GENERAL INFORMATION:
APPLICANT: Aziz, Natasha
APPLICANT: Aziz, Natasha
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER,
TITLE OF INVENTION: NOVEL METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REFERENCE: file
CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT FILING DATE: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SCUPARE: Patentin version 3.2
SEQ ID NO 2307
LENGTH: 103574
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; Batent No. US20020132753A1
; GRNERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION:
; FILE REFERENCE: PT223
; CURRENT FAPLICATION NUMBER: US/09/764,864
; CURRENT FILING DATE: 2001-01-7
; Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 1792
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 1644
; LENGTH: 14176
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8.0%; Score 400.4; DB 3;
Best Local Similarity 60.5%; Pred. No. 4.6e-81;
Matches 859; Conservative 1; Mismatches 477;
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ORGANISM: Homo sapiens
US-09-764-864-1644
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Sequence 17664, Application US/10741600
Publication No. US20050026169A1
GENERAL INFORMATION
GENERAL INFORMATION:
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: MYCCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001499
CURRENT APPLICATION NUMBER: US/10/741,600
CURRENT FILING DATE: 2003-12-22
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TITLE OF INVENTION: Means and methods for improved treatment of cancer based on UGTLD
FILE REPERENCE: F2285PT-1
CURRENT APPLICATION NUMBER: US/10/484,577
CURRENT FILING DATE: 2004-01-22
PRIOR PRIOR PAPLICATION NUMBER: EP 02/08220
PRIOR PAPLICATION NUMBER: EP 01 11 7608.8
PRIOR PAPLICATION NUMBER: EP 01 11 7608.8
PRIOR PILING DATE: 2001-07-23
PRIOR PILING DATE: 2001-07-23
PRIOR PILING DATE: 2001-07-24
PRIOR FILING DATE: 2001-07-24
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    GCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCT
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Pred. No. 2e-80;
1; Mismatches 477; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 660, Application US/10484577
Publication No. US20050032724A1
GENERAL INFORMATION:
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Best Local Similarity 60.5%;
Matches 859; Conservative
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SOFTWARE: Patentin version
SEQ ID NO 660
LENGTH: 177531
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US-10-484-577-660
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US-10-484-577-660/c
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                                                                                                                                                                    GTGCGATCTCGGCTCACTGCAAGCTCCACCTGCTGGGTTCACGCCATTCTCCCCGCCTCAG
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                                                                                                        Gaps
                                                                                  Query Match 8.0%; Score 400; DB 8; Length 46878; Best Local Similarity 49.9%; Pred. No. 1.1e-80; Matches 1923; Conservative 11; Mismatches 1671; Indels 247;
            4.0
NUMBER OF SEQ ID NOS: 73997
SOFWARE: FastSEQ for Windows Version
SEQ ID NO 17664
LENGTH: 46878
                                                     sapiens
                                         ; TYPE: DNA
; ORGANISM: Homo 8
US-10-741-600-17664
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32709 33387 AGGCATATGCCACTGCACCAGAACTAGGATTGAAAGAGACAGAACCTGAAGTTT 33328 ATCATGCCATTGCAGTCCAGCCTGGGTGATAGAGCGAGACTCTGTCTCAKATAAATAAAT 32529 32858 GCCACCACACTT------32829 2500 32589 AGAACAGAACTITAGGTAGGCCTTTCATAACCCCTCCCAACATATCTTCCCCTTTAATGA 32409 32408 TAAAATCAGGATCCCTGATATTTCATCCCAAAAGCAAACCCTATATATTTTCTTCCAGA 32349 1866 33212 32913 2406 2466 CACATGACAACTGCTAYGACCAGGCCAAGAAGCTGGACAGCTGTAAATTTCTGCTGGACA 2800 -----GAGTTGGAGGTTTCAGTGAGCCAAG AACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGMCAGCGGCATCAGCCCTCGGGGCCG TGTGGCAGTTCCGCAAAATGATCAAGTGCGTGATCCCGGGGGAGTGACCCCTTYTTGGAAT TTTTCCTTTGTAATTTTTTTTTTAGAGATGGAGTCCCGCTCTGTTGCCCAGGCTGGACTG ACGCCAAGGATCTCCACGAGGCATACAAAGGGGACTTGCATATCTGCTAAGGATAACATAT 33091 cadroscórgarcrosócroacradadescrosscricossaricasscoarricross TITCACCTCTTGTCAAATAAAAAATATGTTCCAAGAGGACCCTGTAGGGAACGCACCCC reaccregrearce-----creeccreaeccreeaagrecreegarracaegegrea CTACTAAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCGCCTGTAACCCCCAGCTACT GAACAAATAAATCTATCTCACATTCCAATCCCTGTCCTAGACTATTGGCYGCTGGATTCC TGAAGCATCTTGGCGAAGTCATCCCCACCTGTTCCTGAGAGTGGGCAGGTGAGGGCTGAC rcrecridaccacciridercacaccccacarccrcridarcacadadaccedracr reesearcarerecerecerásectraaaactritecaaagsettricacac----teagaat ACAACAACTACGGCTGCTACTGTGGCTTGGGGGGCTCAGGCACCCCCGTGGATGAACTGG ciccecciccaaganacragaaciacaagcecraccaccaiccaracrarrar GTTAGAGATGGAAACAATGACCGACGTGCAAAACAGTGGGCGATGCTGCCCTCCAGTGGC ritrigantritiagraga de de descrito de la competa de la competa de la competa de la competa de la competa de la AGAATGTAGCAACAGTAAACATCACAGCAACTATCCACGTGTCATTTTCTAGCAGTGGTT GTCACTGCACCTTCTGAATACAGGATTTTACTGTATTCTTGCAACCATGTTAAAAATCGC TTTCAGGCCAGGCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGG GCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCT CTTTCAATAAATATATGATAAAAGGACTTATATTTTTTCAAGCCATAGGATCATTTCTCC 

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30920 AAAGGCCCCGAAGCAGGAATGAGCTTGGTTTTGAGGAACCA---CAAGAAAGCCAGTG 30864
                                                                                                                                                                                                                                                              CTGCTCCACT - TTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCC 4112
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US-10-087-192-1978

| Sequence 1978, Application US/10087192
| Publication No. US20020182586A1
| GENERAL INFORMATION:
| APPLICANT: Morris, David W. |
| TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: CANCER |
| FILE REFERENCE: 529452000122 |
| CURRENT APPLICATION NUMBER: US/10/087,192 |
| CURRENT FILING DATE: 2002-03-01 |
| PRIOR PILING DATE: 2000-12-22 |
| PRIOR FILING DATE: 2001-03-02 |
| PRIOR FILING DATE: 2001-03-02 |
| PRIOR FILING DATE: 2001-03-03 |
| PRIOR FILING DATE: 2001-03-05 |
| PRIOR FILING DATE: 2001-03-05 |
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Sequence 1.2.4.1.4.4

Publication No. US20020182586A1

GENERAL INFORMATION:
APPLICANT: Bngelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS OF TITLE OF INVENTION: NOVEL CONCER.
FILE REPERENCE: 52945200012.2
CURRENT APPLICATION NUMBER: US 105/10/087,192
CURRENT FILING DATE: 2002-03-01

PRIOR APPLICATION NUMBER: US 09/747,377

PRIOR APPLICATION NUMBER: US 09/747,377

PRIOR FILING DATE: 2000-12-22

PRIOR FILING DATE: 2001-03-02

NUMBER OF SEQ ID NOS: 2059

SOSTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 14848
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59.8%; Pred. No. 5.1e-80;
tive 0; Mismatches 524;
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; OTHER INFORMATION: n = A,T,C or
US-10-087-192-148
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Best Local Similarity 59.8
Matches 879; Conservative
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NAME/KEY: misc_feature
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                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                 85;
                                                                                                                                                                                        Length 87687;
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8.0%; Score 399; DB 5; Length 87

Best Local Similarity 60.1%; Pred. No. 2.8e-80;

Matches 900; Conservative 1; Mismatches 511; Indels
                                                                                                                           Ö
                                                                                                                           or
                                                                                ; NAME/KEY: misc_feature
; LOCATION: (1) ... (87687)
; OTHER INFORMATION: n = A,T,C
US-10-087-192-1978
                   TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
  LENGTH: 87687
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|                                                                              | RESULT 25 US-09-962-446-281/C ; Sequence 281, Application US/09962436 ; Patent No. US20020001301A1 ; GENERAL INFORMATION: ; APPLICANT: SOSPEt, Daniel ; TITLE OF INVENTION: Cancer Gene Determination a TITLE OF INVENTION: Sets ; FILE REFERENCE: 68220-75 ; CURRENT FILING DATE: 2001-09-25 ; CURRENT FILING DATE: 2000-09-25 ; PRIOR APPLICATION NUMBER: US/60/234,924 ; PRIOR FILING DATE: 2000-09-25 ; PRIOR APPLICATION NUMBER: US/60/234,924 ; PRIOR FILING DATE: 2000-09-25 ; NUMBER OF SEQ ID NOS: 568 ; SOG'TWARE: Patentin version 3.0 ; SEQ ID NO 281 ; LENGTH: 167343 ; TYPE: DNA ; ORGANISM: Homo sapiens | Ouery Match  Best Local Similarity  Best Local Similarity  Best Local Similarity  Best Local Similarity  3 3098 TTTGGGTTTTTTTTTGTTGTTTTTTGAGGGGGG  Oy  3158 CACAGTGGTGCAACCATAGGTCACCAGGGGT  Oy  3158 CACAGTGGTGCAACCATAGGTCACCTCACGGGGGGGGGG |
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| 3101 GGGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGGGTCTTGCTCTGTCACCCAGGCATGAGCAC 3160 | 3521 CCTCCGTTCAGCTCACTGCAACCTCTGCCTCGGGTTCAAGYGATTCTCCTGCCTAAGC 3580 5584 TCTCAGCTCACTGCAACCTCTGCCTCAAGAGTTCTCCACTTCAGC 55638 3581 CTCCTGAGTAGCTGGAATTACAAGCTCCTCAGGTTCTAAGATTTTTTGTTTTT 3640 55639 CTCCCGAGTAGCTGGGATTACCAGTGCTCACCTCGAGTTAA-TTTTTTGTTTTT 55697 3641 TAGCAGAGTGGGATTAACAGTGCCCAGCCGGTTAA-TTTTTTTTTT                                                                                                                                                                                                                                                                                                    | AACTAAGAAAAACCACACACAAAATCAACATTCACAAATTCACATTTCATATTCACATTTCACATTTCACATTTCACATTTTTT                                                                                                                                                          |
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and Therapeutic Screening Using Signatum ACCTCCTGAGCTCAAGGGATCTGCTG 3217 AGTGACTCAAGCCTGTAACCACAGTA 4261 CCAGCCTGGGCGACACAGCGAGACTC 4501 AAATTAGCTGGGTGTAGTGATGCATG 4381 11; TGCTGGGATTACAGGGGTGAGCCACC 3397 DB 3; Length 167343; -80; 532; Indels 45; Gaps

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Determination and Therapeutic Screening Using Signatur
                                                        147533 GCCTCTGCCTCGCCAGTAGTTGGGATTACAGGTGTGCTACCACGCCCAGCTAATTTT 147474
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                       GCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACAGCGAG
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Pred. No. 5.5e-80;
1; Mismatches 532;
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FRACTOR OF US20020102531A1
GRNERAL INFORMATION:
TITLE OF INVENTION: Cancer Gene Determination
TITLE OF INVENTION: Sets
TITLE REFERENCE: 689290-73
CURRENT FILING DATE: 2001-09-28
FRIOR APPLICATION NUMBER: US/60/236,033
PRIOR FILING DATE: 2000-09-28
FRIOR FILING DATE: 2000-09-28
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Best Local Similarity 60.1%;
Matches 872; Conservative 1
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US-09-964-824A-273/c
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ORGANISM: Homo
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147414 CCTCAGGTGATATGCCCACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACT 147355
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Pred. No. 5.5e-80;
1; Mismatches 532;
            TILE OF INVENTION: SIGnature Gene Sets FILE REFERENCE: 689290-189
CURRENT APPLICATION WUMBER: US/10/843,641A
CURRENT FILING DATE: 2004-05-12
PRIOR APPLICATION NUMBER: US/09/873,367
PRIOR FILING DATE: 2001-06-05
PRIOR FILING DATE: 2001-09-18
PRIOR FILING DATE: 2001-09-18
PRIOR FILING DATE: 2001-09-25
PRIOR FILING DATE: 2001-09-25
PRIOR APPLICATION NUMBER: US/09/962,436
PRIOR FILING DATE: 2001-09-25
PRIOR APPLICATION NUMBER: US/09/962,832
PRIOR APPLICATION NUMBER: US/09/962,832
PRIOR PILING DATE: 2001-09-26
PRIOR PELING DATE: 2001-09-27
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PRIOR PILING DATE: 2001-10-03
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    INVENTION: Cancer Gene
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60.1%;
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Best Local Similarity 60.1
Matches 872; Conservative
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US-10-843-641A-2740/C
US-10-843-641A-2740/C
; Sequence 2740, Application US/10843641A
; Publication No. US20050064454A1
; GENERAL INFORMATION:
; APPLICANT: Avalon Pharmaceuticals, Inc.
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S-10-843-641A-5576/c
Sequence 5576, Application US/10843641A
Publication No. US20050064454A1
GENERAL INFORMATION:
APPLICANT: Avalon Pharmaceuticals, Inc.
TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using

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8.0%; Score 398.4; DB 9;
Best Local Similarity 60.1%; Pred. No. 5.5e-80;
Matches 872; Conservative 1; Mismatches 532;
TITLE OF INVENTION: Signature Gene Sets FILE REFERENCE: 689290-189
CURRENT APPLICATION NUMBER: US/10/843,641A
CURRENT FILING DATE: 2001-05-12
PRIOR PELING DATE: 2001-06-05
PRIOR FILING DATE: 2001-09-18
PRIOR APPLICATION NUMBER: US/09/954,531
PRIOR APPLICATION NUMBER: US/09/954,456
PRIOR APPLICATION NUMBER: US/09/962,436
PRIOR FILING DATE: 2001-09-25
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PRIOR FILING DATE: 2001-10-02
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             APPLICANT: Wetzel, Jon. C. APPLICANT: Wetzel, Jon. C. APPLICANT: Wetzel, Jon. C. APPLICANT: Wetzel, Jon. C. APPLICANT: Vockley, Joseph G. TITLE OF INVENTION: Gene Expression Profiles in Esophageal Tissue FILE REFERENCE: 44921-5026
CURRENT APPLICATION NUMBER: US/10/240,425
CURRENT FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: PCT/US01/09847
PRIOR FILING DATE: 2001-03-28
PRIOR FILING DATE: 2001-03-31
NUMBER OF SEQ ID NOS: 1588
SOFTWARE: PATENTING DATE: 2000-03-31
SOFTWARE: PATENTING DATE: 2000-03-31
SOFTWARE: PATENTING DATE: 2000-03-31
SOFTWARE: PATENTING DATE: 2000-03-31
SOFTWARE: PATENTING DATE: 2001-03-31
SOFTWARE: PATENTING DATE: 2001-03-31
SOFTWARE: PATENTING DATE: 2001-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Genbank Accession No. US20040033502A1 AL022318
US-10-240-425-1099
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8.0%; Score 398.4; DB 7; Length 54.0%; Pred. No. 6.1e-80; ive 3; Mismatches 894; Indels
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Matches 1259; Conservative
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                                                                                                CTCAAGTGATCTGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTG 3752
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US-10-240-425-1039
US-10-240-425-1039
Sequence 1039, Application US/10240425
Publication No. US20040033502A1
GENERAL INFORMATION:
APPLICANT: Williams, Amanda
APPLICANT: Boland, Joseph F.
APPLICANT: Lord, Reginald V.
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APPLICANT: Wockley, Joseph G.
APPLICANT: Scherf, Uwe
APPLICANT: Gene Logic, Inc.
TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer:
TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer:
FILE REPERBYCE: 44921-5028-WO
CURRENT APPLICATION NUMBER: US/09/880,107
CURRENT FILING DATE: 2001-06-14
PRIOR APPLICATION NUMBER: US 60/211,379
PRIOR APPLICATION NUMBER: US 60/211,379
PRIOR PILING DATE: 2000-10-02
NUMBER OF SEQ ID NOS: 3950
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 3949
LENGTH: 76798
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US-09-880-107-3949
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Patent No. US20020142981A1
GENERAL INFORMATION:
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US-09-880-107-3949
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US-10-719-993-6815
Sequence 6815, Application US/10719993
; Publication No. US20040265849A1
; GENERAL INFORMATION:
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                                                 TAATCCCAGCTACTCAGGATGCTGAGGCAGGAGAATTGCTTGAACCCAGGGGGGAAAGTT
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Publication No. US20040110156A1
GENERAL INFORMATION:
APPLICANT: Kenneth W. Dobie
TITLE OF INVENTION: MODULATION OF NRF EXPRESSION
FILE REFERENCE: RTS-0456
CURRENT APPLICATION NUMBER: US/10/317,271A
CURRENT FILING DATE: 2002-12-10
NUMBER OF SEQ ID NOS: 160
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 394.6; DB 7;
Pred. No. 1.2e-79;
1; Mismatches 520;
                                                                                                                                                                                                                               rcaaaagaaaaaaaaagaagraaa 14614
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ilarity 60.1%;
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ORGANISM: H. sapiens
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US-10-317-271A-4
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KE: misc feature
LOCATION: (1)...(1980090)
COTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-:)
US-10-741-600-17676
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Publication No. US20050026169A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: MYCCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLO01499
CURRENT APPLICATION NUMBER: US/10/741,600
CURRENT FILING DATE: 2003-12-22
NUMBER OF SEQ ID NOS: 73997
SOFTWARE: FASEEQ for Windows Version 4.0
SEQ ID NO 17676
                                                       1281016 CAGGCTGCAGTGCAGTGCGATCTCAGCTCACTACAAGCTCYGCCACCCAGGTTCACG 1281075
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                     1281076 ccarrerecrecercaecerreceagraceraeaecraeaecerecraecayecea
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US-10-741-600-17676
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; OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-
US-10-719-993-6815
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLEO FO INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLOO1496
CURRENT APPLICATION NUMBER: US/10/719,993
CURRENT FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 55342
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6815
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                                                                                                                                                                                                                                                                                                                                     Score 391.4; DB 8; Length Pred. No. 9.5e-78; 6; Mismatches 547; Indels
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                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 58.6%;
Matches 864; Conservative
                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: (1)...(19800
                                                                                                                                                                     LENGTH: 1980090
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Sequence 175, Application US/09584531

Sequence 175, Application US/09584531

Sequence 175, Application US/09584531

GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION: Process for Identifying Anti-Cancer Therapeutic Agents Using Cance;

TITLE OF INVENTION: Gene Sets

TITLE OF INVENTION: Gene Sets

TITLE OF INVENTION: Gene Sets

TITLE OF INVENTION: Gene Sets

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TITLE OF INVENTION: Gene Sets

FILE REPERBERCE: 68290-77

CURRENT APPLICATION NUMBER: US/60/234,009

PRIOR PELING DATE: 2000-09-20

PRIOR APPLICATION NUMBER: US/60/234,509

PRIOR PILING DATE: 2000-09-20

PRIOR PILING DATE: 2000-09-20

PRIOR PILING DATE: 2000-09-22

PRIOR PILING DATE: 2000-09-22

PRIOR PILING DATE: 2000-09-22

NUMBER OF SEQ ID NOS: 1392

SOFTWARE: Patentin version 3.0

SEQ ID NO 175

LENGTH: 15000

TAPE: DATA
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1281256 AGCCACCGCCCCGGCCCTGTTCTATTTAAATAAATACATGAAACTAAAACACA 1281315
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Pred. No. 8e-79;
3; Mismatches 920;
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Matches 1275; Conservative
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          Score 391.4; DB 8;
Pred. No. 9.5e-78;
6; Mismatches 547;
            7.8%;
                                 Best Local Similarity 58.6
Matches 864; Conservative
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TITLE OF INVENTION: Signature Gene Sets
FILE REFERENCE: 68220-189
CURRENT APPLICATION NUMBER: US/10/843,641A
CURRENT FILING DATE: 2001-06-18
RRIOR FILING DATE: 2001-06-18
PRIOR FILING DATE: 2001-06-18
PRIOR FILING DATE: 2001-09-18
PRIOR FILING DATE: 2001-09-25
PRIOR FILING DATE: 2001-09-25
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PRIOR FILING DATE: 2001-09-27
PRIOR PELICATION NUMBER: US/09/963,7768
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PRIOR FILING DATE: 2001-09-29
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                                                                                                     Sequence 1242, Application US/10843641A Publication No. US20050064454A1 GENERAL INCRMATION Pharmaceuticals, Inc
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; Sequence 897, Application US/09764853
; Patent No. US20020090672A1
; GENERAL INFORMATION:
; TITLE OF INVENTION:
; FILE REFERENCE: PJZ06
; CURRENT APPLICATION NUMBER: US/09/764,853
; CURRENT PILING DATE: 2001-01-17
; Prior application data removed - consult PALM or file wrap; NUMBER OF SEQ ID NOS: 939
; SCO ID NO 897
; SEQ ID NO 897
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55; Conservative
; TYPE: DNA
; ORGANISM: Hom
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                                                                     ATTAAAAATAACTCAGTTGGGCACAGTGACTCAAGCCTGTAACCACAGTACTTTGGAAGT
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59.1%; Pred. No. 2e-78;
tive 1; Mismatches 535;
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Publication No. US20040126762A1
GENERAL INFORMATION:
APPLICANT: David W. Morris
APPLICANT: David W. Morris
TITLE OF INVENTION: Novel Compositions and Mer
FILLE REFERENCE: 529452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILING DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SOFUMARE: FaetSEQ for Windows Version 4.0
SEQ ID NO 64
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Best Local Similarity 59.1
Matches 854; Conservative
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ORGANISM: Homo sapiens
US-10-322-281-64
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US-10-322-281-64/c
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                                                                                                                                   TGCCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGTGCCTGGCCGA
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Publication No. US20050026169A1
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
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   AATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGCACTCCA
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TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR;
TITLE OF INVENTION: CANCER
TITLE OF INVENTION: CANCER
FILE REFERENCE: 529452000122
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2002-03-01
PRIOR PELICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: FESTERQ FOR Windows Version 4.0
SEQ ID NO 700
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Pred. No. 3.3e-78;
1; Mismatches 505;
                                                                                                                                                                                                                                                          Sequence 700, Application US/10087192
Publication No. US20020182586Al
GENERAL INFORMATION:
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; ORGANISM: Homo sapiens
US-10-087-192-700
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Best Local Similarity
Matches 872; Conserv
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APPLICANT: Aziz, Natasha
APPLICANT: Aziz, Natasha
APPLICANT: Aziz, Natasha
APPLICANT: Zlocnik, Albert
TITLE OF INVENTION: NOVEL METHODS OF DIAGNOSIS OF METASTATIC CANCER, COMPOSITIONS AND
TITLE OF INVENTION: METHODS OF SCREENING FOR MODULATORS OF METASTATIC CANCER
FILE REFERENCE: file
CURRENT APPLICATION NUMBER: US/10/756,149
CURRENT APPLICATION NOWBER: 2004-01-12
NUMBER OF SEQ ID NOS: 5818
SOFTWARE: Patentin version 3.2
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Pred. No. 6.9e-78;
1; Mismatches 526; Indels
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Publication No. US20050181375A1
GENERAL INFORMATION:
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Best Local Similarity 58.9°
Matches 881; Conservative
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US-10-756-149-4579/c
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; ORGANISM: HOMO
US-10-756-149-4579
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Pred. No. 4.7e-78;
1; Mismatches 526; Indels
         MYOCARDIAL INFARCTION, METHODS OF
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TITLE OF INVENTION: PRICELLE.
CURRENT APPLICATION NUMBER: US/10/741,600
CURRENT FILING DATE: 2003-12-22
NUMBER OF SEQ ID NOS: 73997
SOFTWARE: PASTSEQ for Windows Version 4.0
SENGTH: 62555
                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 58.9%;
Matches 881; Conservative
                                                                                                                                                                                        TYPE: DNA
ORGANISM: Homo sapiens
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Sequence 55, Application US/10981277

GENERAL INFORMATION:

APPLICANT: Harris, Cole

APPLICANT: Davis, Lisa

TITLE OF INVENTION: Compositions and Methods for Glioma Classification

FILE REPRENCE: 03-966-US

CURRENT APPLICATION NUMBER: US/10/981,277

CURRENT FILING DATE: 2004-11-03

PRIOR PILING DATE: 2003-11-03

NUMBER OF SEQ ID NOS: 57

NUMBER OF SEQ ID NOS: 57

SEQ ID NO 55

LENTH: 150275

TYPE: DAA

CORANISM: Homo sapiens

US-10-981-277-55
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                               AGTICGAGACCAGCCIGGICAAIAIGGIGAAACCCIAICTICIACIAAAAAIACAAAAII
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Pred. No. 8.6e-78;
2; Mismatches 914;
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llarity 54.6%;
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US-10-981-277-55/c
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Best Local Simi
Matches 1256;
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Publication No US20020182586A1
GENERAL INFORMATION:
APPLICANT: Morris, David W.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND MET
TITLE OF INVENTION: CANCER
FILE REFERENCE: 529452001122
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2002-03-01
SPRIOR APPLICATION NUMBER: US/0777377
PRIOR FILING DATE: 2000-12-22
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TYPE: DNA
ORGANISM: Homo sapiens
ORGANISM: Homo sapiens
PEAJURE:
NAME/KEY: misc_feature
LOCATION: 1662, 1665, 1668, 1671, 12844, 13431-13530, 13749, 15475, 15509, 15576,
LOCATION: 20466, 22014, 23090, 23092, 23094, 26394, 30518, 30524, 30673, 36595, 43474
LOCATION: 46942, 47193, 47198
OTHER INFORMATION: n = A,T,C or G
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58.2%; Pred. No. 7.7e-78;
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Publication No. US20040101855A1
GENERAL INFORMATION:
APPLICANT: C. Frank Bennett
APPLICANT: Kenneth W. Dobie
TITLE OF INVENTION: MODULATION OF PPAR BINDING PRO'
FILE REPERENCE: RTS-0433
CURRENT APPLICATION NUMBER: US/10/304,107
CURRENT FILING DATE: 2002-11-22
NUMBER OF SEQ ID NOS: 148
SEQ ID NO 4
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Best Local Similarity 58.2
Matches 891; Conservative
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Pred. No. 8.9e-78;
1; Mismatches 511; Indels
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SEQ ID NO 904
LENGTH: 75252
                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 60.5%;
Matches 868; Conservative
                                                                                                                                                                                     , ORGANISM: Homo sapiens
US-10-087-192-904
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                                                                           AGCCGAGATCCCACCACCTCCAGCCTGGGCGAC-ACAGCGAGACTCTATCTCAAAA 4511
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                                                           4274 AAGGTGGGTCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAAC
                                                                                                                      CCTATCTCTACTAAAAATAC-AAAAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCC
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58.0%; Pred. No. 2.2e-77;
tive 1; Mismatches 558;
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APPLICANT: Tartaglia, Marco
TITLE OF INVENTION: NOONAN SYNDROME GENE
FILE REFERENCE: 2420/1J859-US1
CURRENT APPLICATION NUMBER: US/10/262,552
CURRENT APPLICATION NUMBER: US/00/26,532
PRIOR APPLICATION NUMBER: US 60/326,532
PRIOR FILING DATE: 2001-10-01
NUMBER OF SEQ ID NOS: 35
SOFTWARE: Patentin version 3:1
SEQ ID NO 33
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 33, Application US/10262552 Publication No. US20030125289A1 GENERAL INFORMATION:
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Matches 849; Conservative
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NAME/KEY: misc_feature
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146541 CAAAGTGCTGAGATTACAGGCATGAGCCACCACACACCCAG-----AGGTTTTTTGATCGT 146594
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4445 TTGCAGTGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACAGCGAGACTCTAT 4504
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NAME/KEY: misc_feature
LOCATION: (1)...(300000)
COTHER INFORMATION: where n may be a or g or c or t/u, unknown or other US-10-703-210-33
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                                                                                                                                                                                                                                                          Mutations
                                                                                                                              RESULT 45

US-10-703-210-33

Sequence 33, Application US/10703210

Publication No. US20040121384A1

GENERAL INFORMATION:

APPLICANT: Gelb, Bruce D.

APPLICANT: Tartaglia, Marco

APPLICANT: Niemeyer Charlotte

TITLE REFRENCE: 02420/100M124-US1

CURRENT FILING DATE: 2003-11-05

PRIOR PILICATION NUMBER: US/10/703,210

CURRENT FILING DATE: 2003-11-05

NUMBER OF SEQ ID NOS: 39

SOFTWARE: PatentIn version 3.1

SEQ ID NO 33

LENGTH: 300000
                                                                            CTCAAAAAAATAAATAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 849; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                            Score 386.4; DB 7; Length 304905;
Pred. No. 4.7e-77;
2; Mismatches 923; Indels 167; Gaps
            APPLICANT: Van Eerdewegh, Paul
APPLICANT: Unpuis, Josee
APPLICANT: Dupuis, Josee
APPLICANT: Del Mastro, Richard G.
APPLICANT: Allen, Kristina
TITLE OF INVENTION: NUCLEOTIDE AND AMINO ACID SEQUENCES
TITLE OF INVENTION: RELATING TO RESPIRATORY DISEASES AND OBESITY
FILE REPERBENCE: 2976-4045
CURRENT APPLICATION NUMBER: US/10/271,416
CURRENT FILING DATE: 2002-10-11
PRIOR APPLICATION NUMBER: 60/328,424
PRIOR FILING DATE: 2001-10-11
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 4.0
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Little, Randall D.
Van Eerdewegh, Paul
                                                                                                                                                                                                                                                                                                                                              7.7%;
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 53.33
Matches 1246; Conservative
                                                                                                                                                                                                                                                                        TYPE: DNA
CRGANISM: Homo sapien
US-10-271-416-1
                                                                                                                                                                                                                                                            LENGTH: 304905
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                                  3607 TGCACCACCATGCTTGGCTAATTTTTTGTATTTTTAGCAGAGATGGGGTTTTACCATGTT 3666
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                                                       CCTGCCACCAAGACCAGCTAA-TTTTTGTATTTTTAGTACAGACAGGGTTTCACCATGTT
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Sequence 1, Application US/10271416 Publication No. US20040043021A1 GENERAL INFORMATION:

APPLICANT: Keith, Tim

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Fublication No. US20020182586A1
GENERAL INFORMATION:
APPLICANT: Moraila, David W.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR FILE REPERENCE: 52945200012
CURRENT FILING DATE: 2002-00-102
FRIOR APPLICATION NUMBER: US/10/087,192
CURRENT FILING DATE: 2001-01-02
FRIOR FILING DATE: 2001-03-02
FRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 58
LEAST FAILURT CONTINENT FOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: FastSEQ for Windows Version 4.0
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19.4%; Pred. No. 3.5e-77;
ve 1; Mismatches 499;
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; OTHER INFORMATION: n = A,T,C or G
US-10-087-192-58
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Best Local Similarity 59.4%;
Matches 869; Conservative
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ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 22, Application US/10482065
Fublication No. US20040260058A1
GENERAL INFORMATION:
APPLICANT: AXARON Bioscience AG
TITLE OF INVENTION: their use
TITLE OF INVENTION: their use
TITLE REFERENCE: OZG091/00010-AT
CURRENT APPLICATION UNDBER: US/10/482,065
CURRENT FILING DATE: 2003-12-29
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PARENTIN Ver. 2.1
FILE SECOLUM OF SEQ ID NOS: 53
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                                                  TGCAGTGAGCCGAGATCCCACCACTGCAGCTCCAGCCTGGGCGACACCAGCGAGACTCTATC
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                      GGAAGTCCAAGGTGGGTGGATCACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATAT
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7.7%; Score 385; DB 8; Length 13
Best Local Similarity 59.0%; Pred. No. 1.6e-77;
Matches 847; Conservative 1; Mismatches 511; Indels
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ORGANISM: Homo sapiens
US-10-482-065-22
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                                                CCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAAA 3278
                                                                                                                                                AAATTTTTTTTGAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGC 3338
                                                                                                                                                                                                                                              TTCAAGCAATCCTCCTACCTTGGCATCCCAAAGTGCTGGGATTACAGGGGTGAGCCACCA 3398
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GENERAL INFORMATION:

APPLICANT: Aziz, Natesha
APPLICANT: Ginsburg, Wendy M.
APPLICANT: Ginsburg, Wendy M.
APPLICANT: Zlotnik, Albert
TITLE OF INVENTION: Methods of biagnosis of Soft Tissue Sarcoma, Compositions TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators FILE REFERENCE: 05882.0193.NPUS01
CURRENT APPLICATION NUMBER: US/10/723,860
CURRENT FILING DATE: 2003-11-26
PRIOR PILING DATE: 2003-11-26
NUMBER OF SEQ ID NOS: 8393
SOFTWARE: PATENTIN VERSION 3.2
SEQ ID NO 3910
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Pred. No. 6.2e-77;
0; Mismatches 597;
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Best Local Similarity 57.6%;
Matches 859; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-723-860-3910
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RESULT 49
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US-10-741-601-5712/c
; Sequence 5712, Application US/10741601
; Publication No. US20040166519A1
; GENERAL INFORMATION:
; APPLICANT: CARGILL, Michele et al.
; TITLE OF INVENTION: GENERIC POLYMORPHISMS ASSOCIATED WITH
; TITLE OF INVENTION: STENOSIS, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001500
; CURRENT APPLICATION NUMBER: US/10/741,601
; CURRENT FILING DATE: 2003-12-22
; NUMBER OF SEQ ID NOS: 24415
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 5712
: LENGTH: 73237
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58.8%; Pred. No. 6.6e-77;
tive 3; Mismatches 526;
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Best Local Similarity 58.6
Matches 898; Conservative
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; ORGANISM: Homo sapiens
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NAME/KEY: misc_feature
LOCATION: (25404)..(26575)
OTHER INFORMATION: "n" at positions 25404 through 26575 can be any base.
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                                                                      .6414 ATGGTTTCATAAAAGTTATTTAGATTATTAAAATCTACACATTAAAATAATGAGGCCAGG
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                                                                                                      CAAGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACTGC
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NAME/KEY: misc_feature
LOCATION: (13097)..(13318)
OTHER_INFORMATION: "n" at positions 13097 through 13318 can
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LOCATION: (659)..(1103)
OTHER_INFORMATION: "n" at positions 659 through 1103 can be
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US-09-997-722-22/C
Sequence 22, Application US/0999722
Publication No. US20040072154A1
GENERAL INFORMATION:
APPLICANT: Morris, David
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
FILE REFERENCE: A-71171/RMS/DCF
CURRENT FILING DATE: 2001-11-30
PRIOR APPLICATION NUMBER: US/09/997,722
CURRENT FILING DATE: 2001-11-30
PRIOR APPLICATION NUMBER: US 09/747,377
PRIOR RILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: US 09/798,586
PRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 301
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2:
LENTH. 96594
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Query Match

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.2714 --TCAGGCAATTGGCCCACCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACT 12657
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Pred. No. 1.2e-76;
1; Mismatches 487; Indels
      Best Local Similarity 59.6%;
Matches 859; Conservative 1
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                                138774 CTCTTG--ATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGGGGTGAGGCCACCG
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                                                                             TGTGCGGCTA-CTTATTTCTTTACATTCCATCTTTCCAATAGAATGTAAGATCCACAGAA
                                                                                                             138832 CACCCGGCCAGAATAATAATTCTGTTAAAGAATCATCACTAAATGAGATACCACTTTCT
                                                                                                                                            3518 CAACCTCCGTTCA------GCTCACTGCAACCTCTGC-CTCCCGGGTTCAAG
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                                                                                                                    12010 AAATAAACATTCACCTACAACACAGAGAAGTGGACAATAAAAAATGACTTTTTATTGAAA 11951
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                                TAAGACAAGAAACCTGCATTAGAGGATGTTTGTTCATATTAAATTAAAAATAACTCAGTTG 4230
                                                                 TGAGGGATTTAGGTGACGTATTAAAATAACTTCTTACATGCATAGATTA----TCAGCCA
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Pred. No. 1.9e-76;
1; Mismatches 542; Indels
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Publication No. US20040126762A1
GENERAL INFORMATION:
APPLICANT: David W. Morris
APPLICANT: Marc S. Malandro
TITLE REFERENCE: $23452001000
CURRENT APPLICATION NUMBER: US/10/322,281
CURRENT FILING DATE: 2002-12-17
NUMBER OF SEQ ID NOS: 866
SOFTWARE: FRAELSEQ for Windows Version 4.0
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; OTHER INFORMATION: n = A,T,C
US-10-322-281-314
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ORGANISM: Homo sapiens
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LENGTH: 227246
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                                                                      5553 TCTGGCCTCAACTGATCCACCTGTCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGA
                                                                                                                      GTCACTGTGCCTGGCCGATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAG
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                                                                                                                                                        GCCACTGCGACCAGCCCA - GCTAGCTTTTATACTGAGTCTAATGTGTGTTCATAAATTCAC
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PUBLICATION NO. US20040009488A1
SENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION:
PLIE REFERENCE: PCOSC1
CURRENT APPLICATION NUMBER: US/10/242,515
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US-10-242-515-3770/c
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                                                                                                                                                            Sequence 3770, Application US/09764877

Batent No. US20020147140A1

GREEAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC005

CURRENT APPLICATION NUMBER: US/09/764,877

CURRENT APPLICATION MAD ATE: 2001-01-17

Prior application data removed - refer to PALM or file wrapper
NUMBER OF SEQ ID NOS: 4031

SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                        Query Match 7.6%; Score 382.2; DB 3; Length Best Local Similarity 60.1%; Pred. No. 5e-77; Matches 893; Conservative 1; Mismatches 504; Indels
                                                                      CAGTGAGCCGAGATC-----
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US-09-764-877-3770
                                                                                                                                                                                                                           RESULT 53
US-09-764-877-3770/c
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LENGTH: 6892
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Sequence 10, Application US/10699941
Publication No. US20040146900A1
GENERAL INFORMATION:
APPLICANT: Burmeister: Margit
TTLE OF INVENTION: Ataxia Associated Gene and Protein
FILE REFERENCE: UM-08441
CURRENT APPLICATION UMBER: US/10/699,941
CURRENT FILING DATE: 2003-11-03
NUMBER OF SEQ ID NOS: 62
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PRIOR APPLICATION NUMBER: 09/764,877
PRIOR APPLICATION NUMBER: 09/764,877
PRIOR APPLICATION NUMBER: 60/179,065
PRIOR FILING DATE: 2000-01-31
PRIOR PILING DATE: 2000-01-31
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR APPLICATION NUMBER: 60/217,487
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR FILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-26
PRIOR PILING DATE: 2000-07-26
PRIOR APPLICATION NUMBER: 60/225,758
PRIOR PILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: 60/225,447
PRIOR PILING DATE: 2000-07-11
PRIOR PILING DATE: 2000-07-14
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larity 60.1%; Pred. No. 5e-77;
Conservative 1; Mismatches 504;
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Matches 893; Conser
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20633 TTATATCCGTATGGACTCATAGACATTTATTTTACATCTTGGGTTATAATTCAATATTC 20692
                                                                          20933 AAGCCGTGCAAAATCTCCAAAAGGCTTAATATAAATTTGATTATCTAAAAGAAGCCCTT 20992
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                                        ACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATG
                                                                                                                3958 ACTITITCATATIGCCICAAACCITIATIGITACIGITITITICATIGITACTATITIAGI
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TITLE OF INVENTION: Ataxia Associated Gene and Protein
FILE REFERENCE: UN-0841.
CURRENT APPLICATION NUMBER: US/10/699,941
CURRENT FILING DATE: 2003-11-03
NUMBER OF SEQ ID NOS: 62
SOFTWARE: Patentin version 3.2
SEQ ID NO 11
LENGTH: 59884
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US-10-699-941-11
Sequence 11, Application US/10699941
Publication No. US20040146900A1
GENERAL INFORMATION:
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OTHER INFORMATION: n is a, c, FEATURE:
NAME/KEY: misc feature
LOCATION: (55664)...(55763);
OTHER INFORMATION: n is a, c, US-10-699-941-11
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ORGANISM: Homo sapiens
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60.1%; Pred. No. 1.7e-76;
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                                                                          ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (36437)...(36536)
OTHER INFORMATION: n is a,
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NAME/KEY: misc feature
LOCATION: (42999)..(43098)
OTHER INFORMATION: n is a,
US-10-699-941-10
  SOFTWARE: PatentIn version
SEQ ID NO 10
LENGTH: 47219
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Matches 901; Conservative
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                                               4116 AGAAATACACACACACACACACACACACACAGTTTTTTTAATGTTTGCAACTAAGA
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59.4%; Pred. No. 3.2e-76;
iive 1; Mismatches 546
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; Publication No. US20050186577A1
; Publication No. US20050186577A1
; GENERAL INFORMATION:
; APPLICANT: Wang, Yixin
; TITLE OF INVENTION: BREAST CANCER PROGNOSTICS
; FILE REFERENCE: VDX-5003 USNP
; CURRENT APPLICATION UNMBER: US/10/783,271
; CURRENT FILING DATE: 2004-02-20
; NUMBER OF SEQ ID NOS: 111
; SOFTWARE: PARENTIN VEXBION 3.2
; SEQ ID NO
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; ORGANISM: human
US-10-783-271-108
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US-10-783-271-108
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                                    Gaps
                                  77;
   Score 382; DB 7; Length 59884;
Pred. No. 1.9e-76;
1; Mismatches 521; Indels 77
    Query Match
Best Local Similarity 60.1%;
Matches 901; Conservative
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58.2%; Pred. No. 2.5e-76;
iive 1; Mismatches 568;
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; Sequence 2623, Application US/09764877
; Patent No. US2020147140A1
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins, and if TITLE OF INVENTION: Nucleic Acids, Proteins, and if CURRENT APPLICATION NUMBER: US/09/764,877
; CURRENT FILING DATE: 2001-01-17
; NUMBER OF SEQ ID NOS: 4031
; SOFTWARE: PatentIn Ver. 2.0
; IRMACHIAN CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONTROLLING CONT
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Best Local Similarity 58.23
Matches 855; Conservative
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CTTAAGTGATCCTCCCAACTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGTCAC-- 11833
                                                                                                                                                                                                                                                                    11894 CAACAGTATCAGCCACCTTTTTTTTTTTTTTTGGAGGGGGGGACAGAGTCTTGCTCTG 11953
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                                                                                                                                11834 TGCACTCAGCCATGTCTTGAGAAATTTTCTTAGTGTATTTTGGTAGCAGTGTTAAAGAAA 11893
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PRIOR AFFLICATION NUMBER: 60/180,628
PRIOR PLING DATE: 2000-02-01
PRIOR PLING DATE: 2000-02-04
PRIOR FILING DATE: 2000-02-04
PRIOR FILING DATE: 2000-06-28
PRIOR FILING DATE: 2000-06-28
PRIOR PRIOR APPLICATION NUMBER: 60/217,487
PRIOR FILING DATE: 2000-08-14
PRIOR FILING DATE: 2000-08-14
PRIOR FILING DATE: 2000-07-11
PRIOR APPLICATION NUMBER: 60/220,963
PRIOR PLING DATE: 2000-07-26
PRIOR PRIOR APPLICATION NUMBER: 60/217,496
PRIOR PLING DATE: 2000-07-11
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CORGANISM: Homo sapiens
US-10-216-464-37
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US-10-216-464-37
Squence 37, Application US/10216464
Publication No. US20030207285A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVERTION: Nucleic Acids, Proteins, and Antibodies
FILE REPERENCE: PTZ19C1
CURRENT APPLICATION NUMBER: US/10/216,464
CURRENT PILING DATE: 2002-08-12
PRIOR PPLICATICATION WIMBER: 09/764,883
PRIOR FILING DATE: 2010-01-17
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PRIOR APPLICATION NUMBER: 60/180,628
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR APPLICATION NUMBER: 60/214,886
PRIOR PLING DATE: 2000-02-8
PRIOR FILING DATE: 2000-07-11
PRIOR PLING DATE: 2000-07-11
PRIOR PAPLICATION NUMBER: 60/225,758
PRIOR PAPLICATION NUMBER: 60/220,963
PRIOR PLING DATE: 2000-07-26
PRIOR APPLICATION NUMBER: 60/217,496
PRIOR PLING DATE: 2000-07-11
PRIOR APPLICATION NUMBER: 60/217,496
PRIOR PLING DATE: 2000-07-14
PRIOR PLING DATE: 2000-07-14
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CORGANISM: Homo sapiens
US-10-242-515-2623
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           13562 GCCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCATACACCTTGGCCTCCCAAAGTG 13621
                                                                                                                                            3908 AGAATAAATACAATCTTGCATTCTGCTTTTTCACTTATCACCTTGTTATGACTTTTTCAT 3967
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Publication NO. US20040009488A1
GENERAL INFORMATION:
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PCO05C1;
CURRENT APPLICATION NUMBER: US/10/242,515
CURRENT FILING DATE: 2002-09-13
PRIOR PPLING DATE: 201-01-17
PRIOR PILING DATE: 201-01-17
PRIOR FILING DATE: 2001-01-17
PRIOR FILING DATE: 2000-01-31
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## ALIGNMENTS

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15420

APPLICANT: ROTH, MICHAGO B.

APPLICANT: ROTH, MICHAGO B.

APPLICANT: RANDERSR, STEFAN M.

APPLICANT: RANDESRR, STEFAN M.

APPLICANT: RELSON, MATTHEW ROBERTS

APPLICANT: RELSON, MATTHEW ROBERTS

APPLICANT: HOLYAL-WRIGHTSON, CAROLYN R.

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TITLE OF INVENTION NUMBER: US/10/857,780

CURRENT APPLICATION NUMBER: 10/723,681

PRIOR FILING DATE: 2003-10-25

PRIOR APPLICATION NUMBER: 60/490,234

PRIOR FILING DATE: 2003-10-24

PRIOR APPLICATION NUMBER: 60/525,239

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PRIOR APPLICATION NUMBER: 60/525,239

NUMBER OF SEQ ID NOS: 4962

SOFTWARE: PATENTIN VEFSION 3.2

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APPLICANT: GEORGE, JOSHY
APPLICANT: GEORGE, JOSHY
APPLICANT: VEGA, VINSENSUS B.
TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPOSITIONS FOR CLASSIFICATION,
TITLE OF INVENTION: PROGNOSIS, AND DIAGNOSIS OF CANCERS
FILE REFERENCE: 38271-76067
CURRENT FILING DATE: 2004-10-06
NUMBER OF SEQ ID NOS: 500
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Publication No. US20060035246A1

Publication No. US20060035246A1

Publication No. US20060035246A1

APPLICANT: WARQUEZ,

APPLICANT: WARQUEZ,

TITLE OF INVENTION: COMPOSITIONS

TITLE OF INVENTION: COMPOSITIONS

TITLE OF INVENTION: COMPOSITIONS

TITLE OF INVENTION: COMPOSITIONS

TITLE OF INVENTION: COMPOSITIONS

CURRENT APPLICATION NUMBER: US/11/114,798

CURRENT FILING DATE: 2005-04-26

PRIOR PEPLICATION NUMBER: 10/173,525

PRIOR PELLING DATE: 2001-09-14

NUMBER OF SEQ ID NOS: 58

SOFTWARE: PATCHIN VEY: 3.3

SOFTWARE: PATCHIN VEY: 3.3
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8.4%; Score 419; DB 18; Length 1
Best Local Similarity 59.7%; Pred. No. 34;
Matches 871; Conservative 1; Mismatches 536; Indels
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ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description
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US-11-114-798-57
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                                                                   70813 CCAGGCTGGAGTAAGGTGGCACAATCTCATCTTACTGCACCCTCGACCTCCTGGATTCAA
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Sequence 33, Application US/11121086

Publication No. US2005266459A1

GENERAL INFORMATION:
APPLICANT: NIELSEN, TIM S.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REPERENCE: 09138-0000-0000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT APPLICATION NUMBER: 60/567,570
PRIOR APPLICATION NUMBER: 60/567,570
PRIOR FILING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
SEQ ID NO 33
LUNGTH: 154548
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RESULT 5 US-11-112-908-39/c Sequence 39, Application US/11112908 ; Publication No. US20050260659A1

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Pred. No. 35;
2; Mismatches 946; Indels
APPLICANT: Harris, Cole
APPLICANT: Harris, Cole
APPLICANT: Harris, Cole
TILE OF INVENTION: Breast Cancer Blomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT FILING DATE: 2005-04-22
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/57,978
PRIOR FILING DATE: 2004-04-13
PRIOR PILING DATE: 2004-06-01
PRIOR PILING DATE: 2004-11-30
PRIOR APPLICATION NUMBER: US 60/633,826
PRIOR APPLICATION NUMBER: US 60/633,826
PRIOR FILING DATE: 2004-11-30
PRIOR APPLICATION NUMBER: US 60/633,826
PRIOR FILING DATE: 2004-11-30
SUPTHARE: PATENTING DATE: 2004-11-30
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US-11-112-908-39
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             CTTTTTCATATTGCC---TCAAACCTTTATTGTTACTGTTTTTTTTATTGTTACTATTTTA 4015
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APPLICANT: David Walandro
TITLE OF INVENTION: Novel Compositions and Methods in Cancer
FILE REFERENCE: 529452001300
CURRENT APPLICATION NUMBER: US/10/330,773
CURRENT FILING DATE: 2002-12-27
NUMBER OF SEC ID NOS: 981
SOFTWARE: FREESEQ for Windows Version 4.0
LENGTH: 215974
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Pred. No. 33;
0; Mismatches 529;
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; Sequence 500, Application US/10330773
; Publication No. US20060040262A1
; GENERAL INFORMATION:
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NAME/KEY: misc feature
LOCATION: (1)...(215974)
OCHER INFORMATION: n = A,T,C or
US-10-330-773-500
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Best Local Similarity 59.6
Matches 847; Conservative
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ORGANISM: Homo sapiens
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34299 TCACCCAGGCTGGAGTACAGTGGTGCAATCTCAGCTCACTGCAACCTCTGCCTCCTGGGT 84240
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                                  2944 GIGITAATITICTIGGITCIGGGCAGIGICTCCTITAAICCTCAGAACAACAACTATGGGA 3003
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; Publication No. US20060040262A1
; GENERAL INPORMATION:
    APPLICANT: David W. Morris
; APPLICANT: Marc Malandro
    TITLE OF INVENTION: Novel Compositions and Met
; FILE REFERENCE: S29452001300
; CURRENT APPLICATION NUMBER: US/10/330,773
; CURRENT FILING DATE: 2002-12-27
; NUMBER OF SEQ ID NOS: 981
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 122
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LOCATION: (1)...(348101)
COTHER INFORMATION: n = A,T,C or
US-10-330-773-122
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ORGANISM: Homo sapiens
FEATURE:
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TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS (
TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REPERENCE: CL001559
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SSPTWARE: FastSEQ for Windows Version 4.0
SSPTWARE: FastSEQ for Windows Version 4.0
ENGTH: 46878
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APPLICANT: NOLLSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF ENVEWIND NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES FILE REPERBNCE: 09138.6000.00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR PILING DATE: 2004-05-04
PRIOR FILING DATE: 2004-05-04
SOFTWARE: PATENTING NOS: 107
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Pred. No. 57;
4; Mismatches 986; Indels
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                                                                                                                                                                              ; Sequence 43, Application US/11121086; Publication No. US20050266459A1; GENERAL INFORMATION:
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   30566 AACAAAAAAAA 30555
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Best Local Similarity 52.2
Matches 1210; Conservative
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CORGANISM: Homo sapiens
US-11-121-086-43
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APPLICANT: WU, RINA
TITLE OF INVENTION: COMPOSITIONS
FILE REFERENCE: 6018.011.0004
CURRENT APPLICATION NUMBER: US/11/114,798
CURRENT APPLICATION NUMBER: 10/173,525
PRIOR FILING DATE: 2002-06-17
PRIOR PRILOGATION NUMBER: 09/952,851
PRIOR FILING DATE: 2010-09-14
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PATENTIN Ver. 3.3
SOFTWARE: PATENTIN Ver. 3.3
LENGTH: 92199
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                                       4036 AATTTGCTTATACATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAA
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Pred. No. 1e+02;
3; Mismatches 937; Indels 144; Gaps
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Best Local Similarity 53.6%;
Matches 1252; Conservative 3
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                   99122 ATCCTTTGGCTATTGTGAGTAGTACTACTATGAACATAGGAGTACAAAGATTGGCACATT 99063
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| CATG 2392<br>    <br>CATG 26926                               | CCTG 2452   Db 28001 TGTTTTTTATTTTT                          | 2793; Qy 3468<br>2486 Db 28023<br>27044                          | 2545 Qy 3528<br>27104 Db 28078                                     |                                                                  |                                                                   | TITCCICC 27224   Qy   3706   CCTGCCTCAGTCTCCCAAAGTGCTGGAATTATAGGCGTGAGTCACTGGCCTGGC 3760   CCCACTTT 2725   Db 28258   CTTGCCTTGGCCTCCCAAAGTACTAGGATTTCAGTTGTGAGCCACATACCATAGCAGCTGGGA 28317 |                                                                                                                                                                                                                                                                                                                                                                                                                            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                                              | TITGICAL 27643                                           |                                                                 |                                                                                                                                    |                                                                                                                                | TATITITA 27883  Qy 4356 AAATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTAACTGGGGGGAA 4415  TCAAGCAA 3347  Db 28900 AAATTAGCTGGACATGGTGACACGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAG 28959 |
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| 2333 GGAGGCCGAGCCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAA<br> | 2393 GTGAAACCCTGTCTCTACTAAAAATACAAAAATTAGCCGGACATGGTGGCGAGCG | 2453 TAACCCCAGCTACTTGGAACTTGAGTTGGAGGT 2453 TAATCCTAGTACTGGAACTT | 2487   TTCAGTGAGCCAAGGTCGTGTCACTGCTGCCAGCTCGGGTAAC-AGAGCAACTCTGTCT | 2546 CAAAAAAAAAAATGCTTTCAATAAATATATGATAAAAGGACTTATATTTTTTCAGGCCA | 2606 TAGGATCATTCTCCTGAAGCATCTTGGCGAAGTCCATCCCCACCTGTTCCTGAGAGTGGG | 2/165 GAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG                                                                                                                                                 | 2725 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TOTTGGTTCTGGGGCAGTGTTCACTTAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGTGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCGAATCAATC | 3002 GATAGGTACAATTATCCTCACTTAACAGAAAAATTGAGGCTCAGAAGGCTGAGGTA | 27584   AGCCTCCCAAGATGCTGGGGTGACGGCGTGACCACTGCGCCCGGCCGG | 3108 TTTTGTTGTTGTTTTAGAGACAGGTCTTGCTTGTCACCCAGGATGAGACAGTGTGTGT | 27704 GTTTTTTGTTTTTTTGGGGGTCTCTCACTCTGTCTTCCAGGCTGGAGTGCAGTGGCA 3168 CAACCATAGGTCACTGCAGCCTCCAACCTCCTGAGCTCAAGGGATCTGCTGACCTCAGCCT | 27764 GGTICTUGGCTCAATGCAACCTCCGCCTCCTGGGTTCAAGTGATTCTTGTGCCTCAGCCT 3228 CCCAAGTAGCTGGACTACGAGCGTGCACCACGCCTGGCTAATTAAAAAATTTTT | 2/824 CCCGAGIAGCIGGGGAITACAGGCITGGAGIAACCAIGCCIGGGIAAITITITAITITIA<br>3288 TGTAGAGACTGGGTCTTACTACGTTGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGGAA<br>                                  |

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84660 TGTTTGAGATGGAATTTCACTCTTGTTGCCCAGGCTGGAGTGCAATGGCACTATCTCCGC 84719
 AGCCTCCCAAAGTGCTGGGATGACAGGCGTGAGCCACTGCGCCCAGCCGAGATTTGTCAT 84958
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                                                                                                                                                                         Sequence 58, Application US/11114798
Publication No. US20060035246A1
GENERAL INFORMATION:
APPLICANT: WO. RINA
APPLICANT: WO. RINA
APPLICANT: WARQUEZ, ABBEY
ITLE OF INVENTION: COMPOSITIONS
FILE REFERENCE: 0618.011.0004
CURRENT APPLICATION NUMBER: US/11/114,798
CURRENT APPLICATION NUMBER: 005-04-04
PRIOR FILING DATE: 2005-06-17
PRIOR PLING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PatentIn Ver. 3.3
SEQ ID NO 58
LENGTH: 318488
                                                                         AND
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Pred. No. 42;
3; Mismatches 937; Indels 144; Gaps
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Best Local Similarity 53.6%;
Matches 1252; Conservative 3
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Publication No. US20050266459A1

GENERAL INFORMATION:

APPLICANT: POULSEN, TIM S.

TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROB

FILE REFERENCE: 09138.6000-00000

CURRENT APPLICATION NUMBER: US/11/121,086

CURRENT FILING DATE: 2005-05-04

PRIOR PLING DATE: 2004-05-04

NUMBER OF SEQ 1D NOS: 107

SOFTWARE: PATENTIN VERSION 3.3
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ORGANISM: Homo sapiens
US-11-121-086-14
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Query Match Best Local Similarity

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Matches 1239; Conservative
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                                                                                                                                                                                                          Sequence 33, Application US/11121086
Publication No. US20050266459A1
GENERAL INFORMATION:
APPLICANT: POULSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITIE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-000000.
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR PELING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
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Pred. No. 76;
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Best Local Similarity 59.4<sup>a</sup>
Matches 861; Conservative
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; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-121-086-33
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US-11-121-086-33/c
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US-10-960-414-12/c
; Sequence 12, Application US/10960414
; Publication No. US20060074565A1
GENERAL INFORMATION;
; APPLICANT: MILLER, LANCE D.
; APPLICANT: GEORGE, JOSHY

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                                              CLASSIFICATION
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APPLICANT: VEGA, VINSENSIUS B.
TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPOSITIONS FOR C
TITLE OF INVENTION: PROGNOSIS, AND DIAGNOSIS OF CANCERS
TITLE OF INVENTION: 38271-76667
CURRENT APPLICATION NUMBER: US/10/960,414
CURRENT FILING DATE: 2004-10-06
NUMBER OF SEQ ID NOS: 500
SOFTWARE: PATENTIN VERSION 3.3
SEQ ID NO 12
LENGTH: 159440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 7.6%; Score 381.4; DB 13; Length Best Local Similarity 54.7%; Pred. No. 79; Matches 1051; Conservative 2; Mismatches 773; Indels
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CORGANISM: Homo sapiens
US-10-960-414-12
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RESULT 15
US-10-960-414-490

15-10-960-414-490

1 Sequence 490, Application US/10960414

1 Publication No. US20060074565A1

1 GENERAL INPORMATION:
1 APPLICANT: GEORGE, JOSHY
1 APPLICANT: GEORGE, JOSHY
1 TITLE OF INVENTION: METHODS, SYSTEMS, AND COMPOSITIONS FOR CLASSIFICATION,
1 TITLE OF INVENTION: METHODS, SYSTEMS, AND DIAGNOSIS OF CANCERS
1 TITLE OF INVENTION: METHODS, SYSTEMS, AND DIAGNOSIS OF CANCERS
1 TITLE OF INVENTION: BROGNOSIS, AND DIAGNOSIS OF CANCERS
1 CURRENT APPLICATION NUMBER: US/10/960,414
1 CURRENT FILING DATE: 2004-10-06
1 SOFTWARE: PALENTIN VERSION 3.3
1 SEQ ID NO 490
1 LENGTH: 174009
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Pred. No. 79;
1; Mismatches 493; Indels
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Matches 837; Conservative
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CORGANISM: Homo sapiens
US-10-960-414-490
                                                   70662 CAA 70660
CAA 5001
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                           TTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATACA
                                                                         11742 ATAATGGCTCACATCCCTCAGCATTTACCGTCTGCCAGGAACTGCGCACTTTATGGCCAT
                                                                                                                                4005 TTACTATTTTAGTCACTGAATAATATGGCTTAATTTGCTTATACATCCTCCTGCTCCACT
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// NAME/KEY: misc_feature
// LOCATION: (1)...(201990)
// OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-:
0S-10-995-561-13303
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                                                                          Score 376.8; DB 10;
Pred. No. 72;
4; Mismatches 501;
                                                                            Query Match
Best Local Similarity 59.5%;
Matches 842; Conservative
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US-10-995-561-13303
i Sequence 13303. Application US/10995561
i Publication No. US20050272054A1
i GENERAL INFORMATION:
i APPLICANT: CARGILL, Michele et al.
i TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
i TITLE OF INVENTION: CARRICLER DISORDERS AND DRUG RESPONSE,
i TITLE OF INVENTION: DETECTION AND USES THEREOF
i TITLE OF INVENTION UNMER: US/10/995,561
i CURRENT APPLICATION NUMBER: US/10/995,561
i CURRENT FILING DATE: 2004-11-24
i NUMBER OF SEQ ID NOS: 85702
i SOFTWARE: FEASTEQ for Windows Version 4.0
i SEQ ID NO 13303
i LENGTH: 201990
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                ATTACTGTCTATTTTCTTTATTGCTATATCCCCAGATCTAGAGCAGTGTCTGACATATAG 3822
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ORGANISM: Homo sapiens
FEATURE:
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TIGAACCTGGGAGGTGGAGGTTGCAGTAAGCTGAGACCATGCCACTGCACTCCAGCCTGG 17983
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Sequence 49, Application US/11114798

Publication No. US20060035246A1

GENERAL INFORMATION:

APPLICANT: WU, RINA

APPLICANT: WU, RINA

TITLE OF INVENTION: COMPOSITIONS

TITLE OF INVENTION: COMPOSITIONS

FILE REFERENCE: 0618.011.004

CURRENT APPLICATION NUMBER: US/11/114,798

CURRENT FILING DATE: 2005-04-26

PRIOR FILING DATE: 2002-061.7

PRIOR FILING DATE: 2002-061.7

PRIOR FILING DATE: 2001-09-14

SPRIOR FILING DATE: 2001-09-14

NUMBER OF SEQ ID NOS: 58

SEQ ID NO 49

SEQ ID NO 49

SEQ ID NO 49

SEQ ID NO 49
                                                                                                                                                                                                                              34799
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                                                                                    TGAAAAATGTTCCATGATATGGCAGGATGTTTATGCTATAAGAAATTTAAAGACGCGAG 34685
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 4064 TTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATAC 4123
                            14570 TGAGCGGTGGAGGATTGCTGAAATTGTGGACTACTATGCAGTCATTACC----AACGCAC
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1; Mismatches 881; Indels 178;
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ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description
OTHER INFORMATION: nucleotide
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Best Local Similarity 54.1<sup>1</sup>
Matches 1251; Conservative
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Sequence 58, Application US/11121086
Publication No. US20050266459A1
GENERAL INFORMATION:
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Best Local Similarity 60.5%;
Matches 861; Conservative 1
                                                                                                                                                                                                     TYPE: DNA ORGANISM: Homo sapiens
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US-11-121-086-58
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APPLICANT: POULSEN, TIM S.

APPLICANT: POULSEN, TIM S.

APPLICANT: NIELSEN, KIRSTEN V.

TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-000000

CURRENT APPLICATION NUMBER: US/11/121,086

CURRENT FILING DATE: 2005-05-04

PRIOR PILING DATE: 2005-05-04

NUMBER OF SEQ ID NOS: 107

SOFTWARE: PATENTIN VERSION 3.3

SEQ ID NO S8
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                                         TACTATTTTAAGCTGTGCTCTTTGGTTCAGCTGAGCATGGTGAAAAAGCCCCTTCCCA 154437
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                     TAGGTGCTCAATAAATAATTGATGAAT -- GCACAGCCTAGATATAAACTTTCTTTTCTT
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Publication No. US20050266459A1
GENERAL INFORMATION:
APPLICANT: POULSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 0313.6.000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR FILING DATE: 2006-05-04
PRIOR FILING DATE: 2004-05-04
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SOFTWARE: PatentIn version 3.3
SEQ ID NO 167891
LENGTH: 167891
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US-10-995-561-13256/c
; Sequence 13256, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION:
; APPLICANT: CARGILL, Michele et al.
; TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
; TITLE OF INVENTION: DETECTION AND USES THEREOF
; TITLE OF INVENTION NUMBER: US/10/995,561
; CURRENT APPLICATION NUMBER: US/10/995,561
; CURRENT FILING DATE: 2004-11-24
; NUMBER OF SEQ ID NOS: 85702
; SOFTWARE: FaetSEQ for Windows Version 4.0
; FROIT NO 13256
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                                  AATTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACTCCA
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Pred. No. 2.1e+02;
6; Mismatches 925; Indels 164; Gaps
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ORGANISM: Homo sapiens
US-10-995-561-13256
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 TTTAGCAGAGATGGGGTTTTACCATGTTGCCCAGGCTGGTCTCAAACTCCTGACCTCAAG 3698
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Sequence 18, Application US/11121086; Publication No. US20050266459A1; GENERAL INFORMATION:
APPLICANT: POULSEN, KIRSTEN V.

RESULT 21 US-11-121-086-18

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900 TCACGCCATTCTCCCGCCTCAGCCTCCCCAGTAGCTGGGACTAAAGGCGCCTGCCACCAC 959
113604 TCACGCCATTCTCCTGCCTTAGCCTCCCAAGTAGCTGGGACTACAGGCACCACCACTATT13663
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CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR APPLICATION NUMBER: 60/567,570
PRIOR FILING DATE: 2004-05-04
NUMBER OS SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                 Length 175023;
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                                                                                                                                                                                                                                                                                                                   2; Mismatches 1298;
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50.6%; Pred. No. 95;
                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 1534; Conservative
                                                                                                                                                                                                   TYPE: DNA
CORGANISM: Homo sapiens
US-11-121-086-18
                                                                                                                                                                                   LENGTH: 175023
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| 115953 CAGANGGICHCGARCHCTTGACCTGTG-AFCTGCCC 3376 GGGATTACAGGGGTGACCCACCATGTGCGGCTACTTATT 116011 GGGATTATAGGCGTGACCCACTGTGCCGGCTATTTCT 3436 ATAGAATGTAAGACCGCAGAACAGGGATTACTGCTATTTTTTTT     | 4 3 4 3 4 3 4 3 4 3 4 3 | 114878   TACATACACCCAGGCCGGCGTCACCCCTGTAATCCCAGCACTTTGGCAGCC                                                                                                                                              |  |
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| 3436 ATAGAATGTAAGATCCACAGAACAGGATTACTGCCTAI 116066 TITATTTTTTTTTTTTTTAGACAGGGTGTTGCTCTGTGT 3496 ACAGAGTCTCACTCATCACCTCAACCTCGTTCAGCTC  116126 GCAAACATGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT | ò qa ò qa               | 2400 CCTGTCTCTACTAAAAATACAAAAATTAGCCGGACATGGTGGCGGCGCCTGTAACCCC                                                                                                                                           |  |
| 115953 CAGGATGGTCTCGATCTCTTGACCTCATGATCTGCCC 3376 GGGATTACAGGGGTGAGCCACCACGTGGGGGTACTTATT                                                                                                   | qa oo                   | 114878 TACATACACCCAGGCCTGGTCCTCTGTAATCCCAGCACTTGGGAAGCC 2340 GAGGCGGGGGTTTGAGGTTCGAGACCTGGCCAACACTGGTGAAAC 114938 AAGGCGGGGATCA                                                                           |  |
| 3256 CCACCACGCCTGGCTAATTAAAAATTTTTTTGTAGAC 115895 CCACCAGCCCAGCTAATTTTTGTAGTTTTAGTAGAC 3316 CAGGCTTGTAAACTCCTGGCTTGAAGCAATCCTCC                                                             | 8 8 8                   | 2220 AGTGGTTGTCACTGCACCTTCTGAATACAGGATTTTACTGTATTCTTGCAACCATGTTAA 114818 TAGGGTTGGTCCATTAGGGAAAATGTCCCCCAAGGAACATTGATTCTTACCTATAAGAA                                                                      |  |
| 3196 CCTGAGCTCAAGGGATCTGCTGACCTCAGCCTCCCAAGT                                                                                                                                                | · 영                     | Db                                                                                                                                                                                                        |  |
| 3136 TGCTCTGTCACCCAGGCATGAGCACAGTGGTGCAACCAT                                                                                                                                                | λο qα                   | 2100 GCACCCGTTAGAGATGGAAACAATGACGACGTGCAAAAAAAA                                                                                                                                                           |  |
| 3076 CACAGCTTGTAAGTGGTGACAGTTTGGGGTTTTTTTTGT                                                                                                                                                | oy d                    | 2040 AACATATTTCACCTCTTGTCAAATAAACAAAATATGTTCCAAGGGCCCTGTAGCGAAC 114600 ACAAATTTTCACCTCTTGTCAAATAAACAAATATGTTCCAAGGGGCCCTGTAGCGAAC 114600 ACAAAAACTCTTAAAAATATAAAATATAACTAACTAA                            |  |
| 3026ACAGATAAGAAAACTGAGGCTCAGAAGGC<br>                                                                                                                                                       | oy<br>Op                | Db 114579 CTTTGTTTTGCCACTACACCAGAGATAAACCAGTACAGGGGGTAAAAGTCCCA 114638  Qy 1980 GGGGCACACGCCAAGGATCTCACGAGGCATACAAAGGGGACTTGCATAAGCTAAGGAT 2039  Db 114639 TTTTTTTTTTTTTAAAGGCTAAAAGAGAACAGGAGGAGGAGAGAGA |  |
| 2968 AGTGTCTCTTTAATCCTCAGAACAACACTATGGGATAC                                                                                                                                                 | \( \delta \)            | 114519                                                                                                                                                                                                    |  |
| 2908 CCGGGGGGAATAATAGTAACAACAGCCATGATTAGTC                                                                                                                                                  | oy da                   | 1860                                                                                                                                                                                                      |  |
| 2848 ACCTGTAGCACTAGGTTTATCCCTTCCTTGACCTAGAC 1                                                                                                                                               | ර් සි                   | Oy 1800 CGGCCGTGTGGCAGTTCCGCAAAATGATCAAGTGCGTGATCCCGGGGAGTGACCCCTTY 1859                                                                                                                                  |  |
| 2/88 ITICIOCIGGACAMNCCGIACACCAACCIAILAIA<br>115416 IGAAACCIACITTTTCIGCAGCACCCCCACCCTGAACI                                                                                                   | op of                   | OY 1740 CGATTIGAACTCTGGCTATGTCTTCTTGCAGTGGCCGCCGCCGMCAGCGGCATCAGCCT 1799  Db 114401 GCATTAGTTGCTGCCAGTTCTCCTTGCCTGGCACCAGGCAATAAATGCCTCACTTCCG 114460                                                     |  |
|                                                                                                                                                                                             | ò 8 8                   | OY 1680 GGAGGCAGCGTGGGACCGAGGAGGAGGAGGAGTGTCTCCCGGGGTGCTGGCAGAC 1739  DD 114341 GCCAACTTCTTAAACATCCTTACCTGTAAGTCATTAGGAGTTCAAAGTTTTC 114400                                                               |  |
| 2672 AGGGCTGACCTATTGCTCTGCACTTACTCCTATCTCAGG                                                                                                                                                | ~ 연                     | Qy 1620 TTCACTTTACCAGGTTCCTGGGTCCAACGGTCTTCAGAGGAGGCAGCTGGCAGGGGTCAG 1679                                                                                                                                 |  |

GGCTTCAAGCAATCCTCTACCTTGGCATCCCAAAGTGCT 3375 GACCTCAAGTGATCTGCCTGCCTCCCAAAGTGCT 3729 GATTTATTTAATCCTGAACACAACCCCGTGAGGTAGAAAT 115355 gaachdagrerereacerecererireagecardiere 115415 GCACCCCCACCCTGAACTAGGGTACTGTAGGCTCTAATT 115475 ccacagrictacacacctgagartigas Araarrararaaaraarararaaaaaragrarara 115714 Greréccesecratreritr----atrriatrita 116065 acaedererrecrerceaegecregaerecaerdar 116125 TTTTTAATTTTATGTAGAAGAGTCTCACTTTGTTGCC 116278 cchaggacrircicrradccrrcriccaarcaccraca 115595 Araharrrcahrhachrahrhrhrhrigagargaaghin 115774 115952 rggacrgactcrcacat-ccracacrcacrtcaga 115654 3135 3315 CACCCACACTATTCATACTCGTGCTCTGGCTCGGCAATC 2847 TGACCTCAGCCTCCCAAGTAGCTGGGACTACGAGCGTGCA 3255 CCATGTGCGGCTACTTACTTCCATCCATCTTCCA 3435 TITIGIALITITAGCAGAGATGGGGTTTTACCATGTTGCC 3669 CACTTACTCCTATCTCAGCTGTCCCTCCCACTTTCCAGGT 2731 CAACTGCTAYGACCAGGCCAAGAAGCTGGACAGCTGTAAA 2787 CCCTTCCTTGACCTATGAATTCTAGTTGGTTCTCAGTAGG 2907 CAACAGCCATGATTTAGTGTTAATTTTCTTGGTTCTGGGC 2967 GAACAACACTATGGGATAGGTACAATTATCCTCACTTA-- 3025 AGCACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCT 3195 AACAGGGATTACTGCCTATTTTCTTCCTTTCTTTTGAG 3495 TTGTA--GTTTTAGTAGAGGGGGGGTTTCACCATGTTGGC AAACTGAGGCTCAGAAGGCTGAGCTATTTGCCCAAGATCA AAAAATTTTTTGTAGAGACTGGGTCTTACTACGTTGGC AGTITGGGTTTTTTTTTTTGTTGTTTAGAGACAGGGTCT

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CTGGGTTCAAGTGATTCTCCTGCCTCAGCCACCCGAGTAGCTGGGATTACAGGCATGTGC 12254
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| LOCATION: (1)...(35770)

| OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables US-10-995-661-13296
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US-10-995-561-13296
US-10-995-561-13296
Sequence 13296, Application US/10995561
Foreign No. US20050272054A1
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
TITLE OF INVENTION: DEFECTION AND USES THEREOF
TITLE OF INVENTION UNBER: US/10/995, S61
CURRENT APPLICATION NUMBER: US/10/995, S61
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SECTION OF 32296
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7.4%; Score 367.8; DB 10; Length 53.2%; Pred. No. 3.1e+02; cive 11; Mismatches 914; Indels
Query Match
Best Local Similarity 53.24
Matches 1223; Conservative
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Publication No. US20050260659A1
GENERAL INFORMATION:
APPLICANT: Harris, Cole
APPLICANT: Davis, Lisa M.
TITLE OF INVENTION: Breast Cancer Biomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT PILING DATE: 2005-04-22
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/57,978
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR PILING DATE: 2004-10-07
NUMBER OF SEQ ID NOS: 511
SOFTHARE: PATENTION NUMBER: US 60/631,826
NUMBER OF SEQ ID NOS: 511
SOFTHARE: PATENTIN VERSION 3.3
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|--|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  | CGAGACCAGCCTGGTCAATATGGTGAACCCTATCTCTACTAAAAATACAAAA-TTAGC<br>       | TGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAAGAGATTG      | CTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCCCACCACCACGACTCCAGCCTG           | 4484 GGCGACACAGCGAGACTCTATCTCAAAAAATAAATAAATA                        | 74/c                                                                | Sequence 13274, Application US/10995561<br>Publication No. US20050272054A1<br>GENERAL INFORMATION:<br>APPLICANT: CARGILL, Michele et al. | TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS TITLE OF INVENTION: DETECTION AND USES THEREOF FILE REFERENCE: CLOOISS9 | CURRENT APPLICATION NUMBER: US/10/995,561<br>CURRENT FILING DATE: 2004-11-24<br>NUMBER OF SEQ ID NOS: 85702<br>SOFTWARE: FaetSEQ for Mindows Version 4.0 | EQ ID NO 13274<br>LENGTH: 415117<br>TYPE: DNA<br>ORGANISM: Homo sapiens | FEATURE: NAME: MAGC_feature LOCATION: (1)(415117) OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism | Score 362.2; DB 10; Length 41511'<br>Pred. No. 57; | <i>th</i> 6                                            | CACAGTGGTGCAACCATAGGTCACTGCAACCTCCAATTGTCACCAGGGGTCTGCGGGGCTCAACCTGAGGTCTGCTGGTGGTTCAACGTTCAACGTCAAGGGATCTGCTG | TGCAGTGACCACGATTCTCACTGCAACCTCCCAGGGTTTAAGTGATTCTCCT ACCTCAGCCTCCCCAAGTAGCTGGGACTACGAGCGTGCACCACCACGCCTGGCTAATTAAA | AAAATTTTTTTTTTGTAGAACTGGGGTCTTACTACGTGGCCAGGCTTGTTTTTTTT | GIAITITIAGIAGAGAIGGGGITITACCAIGITGICTGAGCTTAAGTGAIGAGCACTGC CTTCAAGCAATCCTCCTAGCCTCCCAAAGTGCTGGGGTTACAGGGGTGAGCCACC | CIANGUCITCCCAACIGGGCII:ALAGCAIGAGCCACCAIGCCCAGCAAAA<br>AIGIGCGGCTACTTATTTTTTACATTCCATCTTTCCAATAAAATGTAAGATCCACAGAA |

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122277 CGAGCCCGGCCTCCATTTGTTTAAAGACCCCTTTTAGGCCAGCTGTGGTGGCTCATGCCTA 122218
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                                                           TGTCTGACATATAGTAGGTGCTCAATAAATAATTGATGAATGCACAGCCTAGATATAAAC
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APPLICANT: Wyeth
APPLICANT: Burczynski, Michael
APPLICANT: Twine, Natalie
APPLICANT: Twine, Natalie
THOUSE OF INVENTION: Wethod for Monitoring Dr.
TITLE OF INVENTION: Method for Monitoring Dr.
FILE REFERENCE: AM101090 (031896-013000)
CURRENT APPLICATION NUMBER: US/10/775,169
CURRENT FILING DATE: 2004-02-11
NUMBER OF SEQ ID NOS: 5278
SEQ ID NO 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 234, Application US/10775169; Publication No. US20050287532A9; GENERAL INFORMATION:
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US-10-775-169-234/c
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                                                                                                                                                                                                       NUCLEIC ACID ANALOG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 362; DB 17; Length 1
Pred. No. 1.1e+02;
1; Mismatches 566; Indels
                                                                                                                                                           APPLICANT: POULSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID PROBES AND NUCLEIC ACID PROBES AND NUCLEIC ACID PROBES AND NUCLEIC ACID PROBENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR APPLICATION NUMBER: 60/567,570
PRIOR FILING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: PatentIn version 3.3
    325195 CAAAACAACCAAACAAAAAAA 325173
                                                                                                 Sequence 4, Application US/11121086 Publication No. US20050266459A1 GENERAL INFORMATION:
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Best Local Similarity 57.5%;
Matches 858; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 4
LENGTH: 164810
                                                           RESULT 26
US-11-121-086-4/c
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Sequence 13308, Application US/10995561

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Sequence 13308, Application US/2050272054A1

Sequence 13308, Application US/2050272054A1

TUBENTIAL SERVENCE ASSOCIATED WITH

TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF

TITLE OF INVENTION: DETECTION AND USES THEREOF

TITLE OF INVENTION: DETECTION AND USES THEREOF

TITLE OF INVENTION: DETECTION AND USES THEREOF

CURRENT APPLICATION NUMBER: US/10/995,561

CURRENT FILING DATE: 2004-11-24

NUMBER OF SEQ ID NOS: 85702

SEQ ID NO 13308

LENGTH: 148935
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                                                                                                                                                                                                                                                                                                                   TCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAAAAATACAAAAATTAGC 4363
TITAGAAGGCCAAATITACAAATCTGATGAAAGCTATGAACCCTCTCCCCAGAGAAATAC 4123
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                                                                                                                                                                                                                                                                  CACTIGIGGIGGIGCAIGCCIGTAAICCCAGCTACTCAGGAGGCIGAGGCACGCACAAITG
                                                                                                                                                                                                32189 TGATTTTATATATCATGCATTGATCATTTAGAAAATAATGGTTTGGCTGGGCACGGTGGCTC
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                                                                              ACACACACACACACTCACACACAGTTTTTTTTAATGTTTGCAACTAAGAAAC
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                                                                                                                                                        CTGCATTAGAGGATGTTTGTTCATATTAAAAATAACTCAGTTGGGCACAGTGACTC
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59.1%; Pred. No. 1.3e+02;
tive 2; Mismatches 500; Indels 118; Gaps
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Best Local Similarity 59.1
Matches 897; Conservative
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ORGANISM: Homo
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                                                                                                                                          Gaps
                                                                                                     Length 35962;
                                                                                                   Score 361.6; DB 10; Length 35962
Pred. No. 3.5e+02;
1; Mismatches 460; Indels 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32844 AGCCAGGAATTTCTTTTTTTTTTGAGACAAGAG--
                                                                                                   Query Match
Best Local Similarity 58.9%;
Matches 844; Conservative
; LENGTH: 35962
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-775-169-234
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Sequence 49, Application US/11114798
Publication No. US20060035246A1
GENERAL INPORMATION:
APPLICANT: WU, RINA
APPLICANT: WARQUEZ, ABBEY
TITLE OF INVENTION: COMPOSITIONS
TITLE OF INVENTION: COMPOSITIONS
FILE REFERENCE: 0618.011.0004
TITLE OF INVENTION: UNMBER: 10/173,525
PRIOR APPLICATION NUMBER: 10/173,525
PRIOR APPLICATION NUMBER: 10/173,525
PRIOR APPLICATION NUMBER: 09/952,851
PRIOR APPLICATION NUMBER: 09/952,851
PRIOR APPLICATION NUMBER: 09/952,851
PRIOR APPLICATION NUMBER: 09/952,851
SROFTWARE: Patentin Ver. 3.3
SEQ ID NO 49
LENGTH: 121736
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3164 GGTGCAACCATAGGTCACTGCAGCCTCCAGAGCTCAAGGGATCTGCTGACCTCA
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US-11-114-798-49/c
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       TGGCCAGGCTTGTCTTAAACTCCTGGCTTCAAGCAATCCTCCTACCTTGGCATCCCAAAG
                               13863 GACAATCTTTGTCTTTTGATTGGAGAGTTTAATCCATTTACATTTAAGGTAATTAACCAA
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; Sequence 13308, Application US/10995561
; Publication No. US20050272054A1
; GENERAL INFORMATION.
; APPLICANT: CARGILL, Michele et al.
; TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
; TITLE OF INVENTION: CARDICOVASCULAR DISORDERS AND DRUG RESPONSE, METH
; TITLE OF INVENTION: DETECTION AND USES THEREOF
; FILE REFERENCE: CLO01559
; CURRENT FILING DATE: 2004-11-24
; VUMBER OF SEQ ID NOS: 85702
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 13008
; SEQ ID NO 13008
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   --CTGGAGTGCAGTGGCAC 19909
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                                                          TTAAAACAATCTTGACAACTTTGCAGAATAAATACAATCTTGCATTCTGCTTTTTCACTT
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                            Score 356.8; DB 17; Length
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US-11-121-086-61
Sequence 61, Application US/11121086
Publication No. US20050266459A1
GENERAL INFORMATION:
APPLICANT: POULSEN, TIM S.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2004-05-05-04
PRIOR PLING DATE: 2004-05-04
PRIOR FILING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
SEQ ID NO 61
LENGTH: 169495
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                                                59185 CCAGACTCTAGACCAGGCC--------CTGTCCTGTTCACGTTCTTCCA
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LOCATION: (139457)..(157244)
OTHER INFORMATION: a, c, g, t, unknown or other
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OTHER INFORMATION: a, c, g, t,
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ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: modified base
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                ATCCTCCTGCTCCACTTTAGAAGGCCAAATTTACAAATCTGATGAAAGCTATGAACCCTC 4108
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.larity 57.1%; Pred. No. 1.3e+02;
Conservative 1; Mismatches 553; Indels 85; G
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Publication No. US20050260659A1
GENERAL INFORMATION:
APPLICANT: Harris, Cole
APPLICANT: Davis, Lisa M.
ITLE OF INVENTION: Breast Cancer Biomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT FILING DATE: 2005-04-22
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-11-30
PRIOR FILING DATE: 2004-11-30
NUMBER OF SEQ ID NOS: 511
SEQ ID NO 57
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Best Local Similarity
Matches 852; Conserv
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| Publication No. US20050272054A1
| GENERAL INFORMATION:
| APPLICANT: CARGILL, Michele et al. |
| TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS |
| TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, TITLE OF INVENTION: DETECTION AND USES THEREOF |
| FILE REPERENCE: CLO01559 |
| CURRENT APPLICATION NUMBER: US/10/995,561 |
| CURRENT APPLICATION NUMBER: US/10/995,561 |
| CURRENT APPLICATION NUMBER: US/10/995,661 |
| CURRENT APPLICATION NUMBER: US/10/995,561 |
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52.0%; Pred. No. 4e+02;
tive 20; Mismatches 968;
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Best Local Similarity
Matches 1199; Conserv
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US-10-995-561-13251/c
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US-10-995-561-13251
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ORGANISM: 1
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FEATURE:
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| LOCATION: (1) - (56054)
| LOCATION: (1) - (56054)
| OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-;
US-10-995-561-13402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAAAAGGACTTATATTTTTCAAGCCATAGGATCATTTCTCCTGAAGCATCTTGGCGAAG
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                                                                                                                                                                 7.1%; Score 353.2; DB 10; Length 52.0%; Pred. No. 3e+02; ive 20; Mismatches 968; Indels
                                                                                                                                                                   Length
                                                                                                                                                                     Query Match
Best Local Similarity 52.0
Matches 1199; Conservative
               LENGTH: 56054
TYPE: DNA
ORGANISM: Homo sapiens
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Publication No. US20050272054A1
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: DETECTION AND USES THEREOF
TITLE OF INVENTION: DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT PILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FASESEQ for Windows Version 4.0
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                                                                  TCATGGCACTTAAGAGATGCTTAACAAACCTTTCCTACAATGTTCCTCAGATTTTCAGAG
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APPLICANT: WI, RINA
APPLICANT: WARQUEZ, ABBEY
TITLE OF INVENTION: COMPOSITIONS
TITLE OF INVENTION: COMPOSITIONS
TITLE OF INVENTION: COMPOSITIONS
TITLE OF INVENTION: COMPOSITIONS
FILE REFERENCE: 0618.011.0004
CURRENT FILING DATE: 2005-04-26
PRIOR PILING DATE: 2005-06-17
PRIOR PLICATION NUMBER: 04/952,851
PRIOR PLICATION NUMBER: 04/952,851
PRIOR PLICATION NUMBER: 04/952,851
PRIOR PLICATION NUMBER: 04/952,851
PRIOR PLICATION NUMBER: 04/952,851
SHIOR PLICATION NUMBER: 04/952,851
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PALENTIN VET: 3.3
SEQ ID NO 46
LENGTH; 895980
                                                                                                    CAGCTACTCGGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAG-AGGTTGCAG
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4214 -TAAAAATAACTCAGTTGGGCACAGTGACTCAAGCCTGTAACCACAGTACTTTGGAAGTC
                       54121 GATAAAAARTACAGGCAGGGCCCAGTGGCTCACRCCTGTAATACCCAACACTTTGGGAGGC
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ORGANISM: Artificial Sequence
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Pred. No. 1.5e+02;
2; Mismatches 915;
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APPLICANT: Harris, Cole
APPLICANT: Davis, Lisa M.
TITLE OF INVENTION: Breast Cancer Blomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/575,978
PRIOR FILING DATE: 2004-04-13
PRIOR FILING DATE: 2004-06-01
PRIOR APPLICATION NUMBER: US 60/631,702
PRIOR APPLICATION NUMBER: US 60/631,702
PRIOR APPLICATION NUMBER: US 60/631,702
PRIOR FILING DATE: 2004-11-30
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NUMBER OF SEQ ID NOS: 511
SOFTWARE: PATENTIN VOWER: US 60/633,826
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Publication No. US20050260659A1
GENERAL INFORMATION:
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Best Local Similarity 53.4%;
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; Publication No. US20050260659A1
; GENERAL INFORMATION:
; APPLICANT: Harris, Cole
; APPLICANT: Davis, Lisa M.
; TITLE OF INVENTION: Breast Cancer Biomarkers
; FILE REFERENCE: 04.164-US
; CURRENT APPLICATION NUMBER: US/11/112,908
; CURRENT FILING DATE: 2005-04-22
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; PRIOR PEPLICATION NUMBER: US 60/57,978
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; PRIOR FILING DATE: 2004-06-01
; PRIOR APPLICATION NUMBER: US 60/57,978
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Pred. No. 1.3e+02;
1; Mismatches 524;
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Publication No. US20050260559A1
GENERAL INFORMATION:
APPLICANT: Harris, Cole
APPLICANT: Davis, Lisa M.
ITLE OF INVENTION: Breast Cancer Biomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/21/112,908
CURRENT APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR APPLICATION NUMBER: US 60/57,978
PRIOR FILING DATE: 2004-06-01
PRIOR PILING DATE: 2004-06-01
PRIOR PILING DATE: 2004-11-30
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Best Local Similarity 59.2%;
Matches 871; Conservative
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Pred. No. 1.4e+02;
1; Mismatches 524; Indels
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PRIOR FILING DATE: 2004-11-30
PRIOR PELLANG NUMBER: US 60/633,826
PRIOR FILING DATE: 2004-12-07
NUMBER OF SEQ ID NOS: 511
SEQ ID NO 59
LENGTH: 168656
                                                                                                                                                                                                                                                                                   / Match 7.0%;
Local Similarity 59.2%;
les 871; Conservative 1
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US-11-112-908-59
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Best Local S
Matches 871
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AAATACAAA-AATTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCTACTCGGGAGG
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                                                                                                      ACTTGAGGTGAGAAGTTCGAGACCAGCCTGGTCAATATGGTGAAACCCTATCTCTACTAA
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Publication No. US20050260659A1
GENERAL INFORMATION:
APPLICANT: Barris, Cole
APPLICANT: Bavis, Lisa M.
TITLE OF INVENTION: Breast Cancer Biomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT PILING DATE: 2004-04-23
PRIOR PILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR FILING DATE: 2004-06-01
PRIOR PLILING DATE: 2004-11-30
PRIOR FILING DATE: 2004-11-07
PRIOR FILING DATE: 2004-11-07
PRIOR FILING DATE: 2004-11-07
SPRIOR FILING DATE: 2004-11-07
NUMBER OF EXAMPLED DATE: 2004-11-07
SOFTWARE: PatentIn Version 3.3
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CORGANISM: Homo sapiens
US-11-112-908-38
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US-11-112-908-38/c
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| 165128 GGTCCGAGCTACTTGGGAGGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3566 RES                                  |
|                                                             | 165128 GGTCCAGCTACTTGGGGGGCTGAGGGAGAGAAT  2488 TCAGTGAGCCAAGTTCTCATTAATAATATATAATAAT  16508 GCAGTGAGCCATGATCGCACCACTGCACTCGAGCC  2568 GCAGTGACCCATGATCGCACCACTGCACTCAGCC  2668 GGATCATTTCTCTCTAATAATAATAATAATAAT  2608 GGATCATTTCTCTCAAAATAATAAATAATAATAATAATAATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3507 CTTCATCACCTCAACCTCCGTTCAGCTCACTGCAAA |

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157924 GCGTAAATCATTTCACAAACAGAAACATTACCAATATCCTAATTGCTTTAGACGCTCAAC 157865
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                         APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS OF
TITLE OF INVENTION: DETECTION AND USES THERROF
FILE REFERENCE: CLOOISS9
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
SUTMERN FILING DATE: 2004-11-24
SUTMER OF SEQ ID NOS: 85702
SOFTWARE: FASISEQ for Windows Version 4.0
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Sequence 13319, Application US/10995561

Publication No. US20050272054A1

GENERAL INFORMATION:
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CORGANISM: Homo sapiens
US-10-995-561-13319
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LOCATION: (1)...(403278)

OTHER INFORMATION: n = A,T,C or G, or insertion/deletion polymorphism (see Tables 1-

US-10-995-561-13421
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Sequence 13421, Application US/10995561
Publication Wo. US20050272054A1
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE DO INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CREMETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CREMETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: DETECTION AND USES THEREOF
TITLE OF INVENTION: DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FREESEQ for Windows Version 4.0
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Matches 770; Conservative
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Publication No. US20040146924A1
GENERAL INFORMATION:
APPLICANT: YAN, Chunhua et al.
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
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US-10-786-065-3
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                                                                                        2027 TGAGCCGAGATTGCACTGCACTCCAGCCTGGGCGACGGAGTGAGACGACCTCACAAA 2086
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                                                      TGAGCCGAGATCCCACCACTGCACTCCAGCCTGGGCGACACAGCGAGACTCTATCTCAAA
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Pred. No. 2.1e+02;
1; Mismatches 550; Indels
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                                                                                                                                              50772 Traaccagacraaaraccaraaraccarc
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APPLICANT: Twine, Natalie
APPLICANT: Twine, Natalie
APPLICANT: Trepicchio, William
TITLE OF INVENTION: Method for Monitoring Drug Act
FILE REFERENCE: AM101080 (031896-013000)
CURRENT APPLICATION NUMBER: US/10/775,169
CURRENT PILING DATE: 2004-02-11
NUMBER OF SEQ ID NOS: 5278
SOFTWARE: Patentin version 3.2
SEO ID NO 352
                                                                                                                                                                                                                  RESULT 42

18-10-775-169-352
Sequence 522, Application US/10775169
Publication No. US20050287532A9
RENERAL INPORMATION:
APPLICANT: Wyeth
RENERAL BUZCZYNSKI, Michael
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Best Local Similarity 57.4%;
Matches 851; Conservative
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ORGANISM: Homo sapiens
US-10-775-169-352
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Sequence 2, Application US/11121086

Sequence 2, Application US/11121086

Publication No. US20050266459A1

GENERAL INFORMATION:
APPLICANT: POULSEN, TIM S.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-00000

CURRENT APPLICATION NUMBER: US/11/121,086

CURRENT FILING DATE: 2005-05-04

PRIOR APPLICATION NUMBER: 60/567,570

PRIOR FILING DATE: 2004-05-04
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Pred. No. 1.3e+02;
1; Mismatches 527; Indels
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SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
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Matches 851; Conservative
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Best Local Similarity
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  ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND THEREOF
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7.0%; Score 350.8; DB 10; Length
Best Local Similarity 58.4%; Pred. No. 3.2e+02;
Matches 840; Conservative 1; Mismatches 518; Indels
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TITLE OF INVENTION: ACID MOLECULES ENCODI
FILE REPRENCE: CLOOJO9BOLY II
CURRENT APPLICATION NUMBER: US/10/786,065
CURRENT FILING DATE: 2004-02-26
NUMBER OF SEQ ID NOS: 10
                                                                                                                                                                              TYPE: DNA ORGANISM: Homo sapiens
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                             3150 GCCATGAGCACAGTGGTGCAACCATAGGTCACTGCAGCCTCAACCTCCTGAGGG
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                                                                                          TCTCTACTAAAAATACAAAA-TTAGCTGGGTGTAGTGATGCATGCCTGTAGTCCCAGCT
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APPLICANT: DULLSEN, TIM S.
APPLICANT: NIELGEN, TIRSTEN V.
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                                                                                                                                                        Methods in Cancer
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Pred. No. 1.4e+02;
1; Mismatches 452; Indels
                                                                                               APPLICANT: David W. Morris
APPLICANT: David W. Morris
APPLICANT: Marc Malandro
TITLE OF INVENTION: Novel Compositions and Met
FILE REFERENCE: 529452001300
CURRENT APPLICATION NUMBER: US/10/330,773
CURRENT FILING DATE: 2002-12-27
NUMBER OF SEQ ID NOS: 981
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 698
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                     Sequence 698, Application US/10330773
Publication No. US20060040262A1
GENERAL INFORMATION:
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Best Local Similarity 58.3
Matches 862; Conservative
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                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens
US-10-330-773-698/c
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                                                                           Score 347.8; DB 17; Length 15598
Pred. No. 1.6e+02;
4; Mismatches 871; Indels 183;
                                                                                                                                                      TTAAAAATCGCTTTCAGGCCAGGCGCGGTGGCTCATGCC
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                                                                             Query Match
Best Local Similarity 54.0%;
Matches 1241; Conservative
                     ; ORGANISM: Homo sapiens
US-11-121-086-57
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APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT APPLICATION NUMBER: 06/567,570
PRIOR APPLICATION NUMBER: 60/567,570
PRIOR FILING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin version 3.3
SEQ ID NO 57
LENGTH: 155989
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; Publication No. US20050266459A1
; GENERAL INFORMATION:
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US-11-121-086-57/c
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Pred. No. 1.5e+02;
2; Mismatches 895; Indels
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APPLICANT: Harris, Cole
APPLICANT: Harris, Cole
APPLICANT: Harris, Cole
TITLE OF INVENTION: Breat Cancer Biomarkers
FILE OF INVENTION: Breat Cancer Biomarkers
FILE REFERENCE: 04-164-US
CURRENT APPLICATION NUMBER: US/11/112,908
CURRENT FILING DATE: 2004-04-22
PRIOR APPLICATION NUMBER: US 60/564,758
PRIOR FILING DATE: 2004-04-23
PRIOR FILING DATE: 2004-04-13
PRIOR FILING DATE: 2004-04-11
PRIOR PILING DATE: 2004-06-10
PRIOR APPLICATION NUMBER: US 60/631,702
PRIOR PILING DATE: 2004-11-30
PRIOR PILING DATE: 2004-11-30
PRIOR PILING DATE: 2004-11-30
SOFTWARE: PatentIn version 3.3
SEQ ID NO 60
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; Publication No. US20050260659A1
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Best Local Similarity 53.5%;
Matches 1167; Conservative
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ORGANISM: Homo sapiens
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US-11-121-086-57
Sequence 57, Application US/11121086
Publication No. US20050266459A1
GENERAL INFORMATION:
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APPLICANT: POULSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REPERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT APPLICATION NUMBER: US/570,570
PRIOR FILING DATE: 2004-05-04
PRIOR FILING DATE: 2004-05-04
SOFTWARE: PATENTING NOS: 107
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CORGANISM: Homo sapiens
US-11-121-086-57
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Best Local Similarity 57.0
Matches 836; Conservative
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CORGANISM: Homo sapiens
US-11-121-086-29
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                            Gaps
  Length 155989;
                          98;
Score 344.8; DB 17; Length
Pred. No. 1.7e+02;
1; Mismatches 493; Indels
 6.9%;
58.9%;
Query Match
Best Local Similarity 58.9°
Matches 848; Conservative
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                                                                                             APPLICANT: POULSEN, TIM S.
APPLICANT: NUELSEN, KIRSTEN V.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES
FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR FILING DATE: 2005-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: PATENTIN VERSION 3.3
SEQ ID NOS: 107
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57.0%; Pred. No. 1.6e+02;
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Publication No. US20050266459A1
GENERAL INFORMATION:
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58.6%; Pred. No. 4.9e+03;
tive 2; Mismatches 496;
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US-09-925-065A-667241
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US-09-925-065A-667241/c
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Publication No. US20050272054A1
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele et al.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS (TITLE OF INVENTION: DETECTION AND USES THEREOF
FILE REFERENCE: CLO01559
CURRENT APPLICATION NUMBER: US/10/995,561
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13231
LENGTH: 52192
                                                                                                                                                           TYPE: DNA
ORGANISM: Homo sapiens
US-10-995-561-13231
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RESULT 52 US-10-995-561-13231 ; Sequence 13231, Application US/10995561

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       Length 52192;
Query Match
6.9%; Score 344.6; DB 10; Length
Best Local Similarity 57.0%; Pred. No. 3.7e+02;
Matches 888; Conservative 3; Mismatches 577; Indels
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RESULT 54
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LENGTH: 79528
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ACTITAACAGATAAGAAAACTGAGGCTCAGAAGGCTGAGCTATTTGCCCCAAGATCACACAG 3080
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APPLICANT: Hitachi Software Engineering Co., Ltd.,
TITLE OF INVENTION: A method of predicting cancer condition
FILE REFERENCE: PH-1533-PCT
CURRENT APPLICATION NUMBER: US/10/276,233A
CURRENT APPLICATION NUMBER: US/2-11-14
PRIOR FILING DATE: 2001-03-14
PRIOR FILING DATE: 2001-03-14
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-04-06
PRIOR FILING DATE: 2001-08-02
NUMBER: PS PRIOR PRIOR NUMBER: JP SOUTHWARE: PRIOR FILING DATE: 2001-08-02
SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 6
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US-10-276-233A-6/c
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                                                                                                                                                                   Gaps
                                                                                                         DB 10; Length 79528;
                                                                                                                                                                   19;
                                                                                                            Score 344.4; DB 10; Length
Pred. No. 2.8e+02;
0; Mismatches 271; Indels
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                                                                                                            Query Match
Best Local Similarity 65.3%;
Matches 546; Conservative C
TYPE: DNA; ORGANISM: Homo sapiens
US-10-276-233A-6
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Publication No. US20050272054A1
GENERAL INFORMATION.
GENERAL INFORMATION.
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS (TITLE OF INVENTION: CARDIOVASCULAR DISORDERS AND DRUG RESPONSE, METHODS (TITLE OF INVENTION: DEFECTION AND USES THEREOF
FILE REFERENCE: CL001559
CURRENT FILING DATE: 2004-11-24
NUMBER OF SEQ ID NOS: 85702
SSCPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13341
LENGTH: 28693
        CAAGACCAGCCTGGCCACCATGGTGAAACCCCGTCTCTACTAAAAAATTAAAAATTAGCC
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Best Local Similarity 50.1%; Pred. No. 5.9e+02;
Matches 1599; Conservative 15; Mismatches 1355;
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; ORGANISM: Homo sapiens
US-10-995-561-13341
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           OF INVENTION: Novel Compositions and Methods in Cancer
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TITLE OF INVENTION: NOVEL CURFUL-
FILE REFERENCE: 529452001300
CURRENT APPLICATION NUMBER: US/10/330,773
NUMBER OF SEQ ID NOS: 981
SOFTWARE: FastSEQ for Windows Version 4.0
SEO ID NO 278
LENGTH: 127722
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// LOCATION: (1)...(127722)

OTHER INFORMATION: n = A,T,C or

US-10-330-773-278
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Matches 833; Conservative
                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo sapiens
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58.5%; Pred. No. 5e+03;
Live 2; Mismatches 497; Indels 113; Gaps
                    APPLICANT: Wang, David G. TITLE OF INVENTION: Identification and Mapping of Single TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
                                                                                       TITLE OF INVENTION:
FILE REFERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT FILING DATE: 2001-08-08
PRIOR PILING DATE: 2000-10-24
PRIOR PILING DATE: 2000-11-20
PRIOR APPLICATION NUMBER: US 60/25,147
PRIOR APPLICATION NUMBER: US 60/25,147
PRIOR PILING DATE: 2000-11-30
PRIOR PILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-01-6
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 95/086
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 667240
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Matches 863; Conservative
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ORGANISM: Homo sapiens
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US-09-925-065A-667240/c
; Sequence 667240, Application US/09925065A
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Fublication No. US20040181048A1
GENERAL INFORMATION:
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Mucleotide Polymorphisms in the Human Genome
TITLE REPERENCE: 108827.135
CURRENT APPLICATION NUMBER: US/09/925,065A
CURRENT PILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/243,096
PRIOR PILING DATE: 2000-10-24
PRIOR FILING DATE: 2000-11-20
PRIOR FILING DATE: 2000-11-20
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                                                                                                                                                                                                                                                                                                             6.9%; Score 343; DB 7;
58.5%; Pred. No. 5e+03;
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FLING DATE: 2000-11-30
PRIOR FLING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/289,846
PRIOR FILING DATE: 2001-05-09
NUMBER OF SEQ ID NOS: 957086
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 657242
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CORGANISM: Homo sapiens
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APPLICANT: POULSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: NUCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR FILING DATE: 2004-05-04
NUMBER OF SEQ ID NOS: 107
SOFTWARE: PATENTIN VERSION 3.3
SEQ ID NO 10
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Publication No. US20050266459A1
GENERAL INFORMATION:
APPLICANT: POULSEN, TIM S.
APPLICANT: NIELSEN, KIRSTEN V.
TITLE OF INVENTION: UNCLEIC ACID PROBES AND NUCLEIC ACID ANALOG PROBES FILE REFERENCE: 09138.6000-00000
CURRENT APPLICATION NUMBER: US/11/121,086
CURRENT FILING DATE: 2005-05-04
PRIOR FILING DATE: 2006-05-04
PRIOR FILING DATE: 2004-05-04
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larity 58.1%; Pred. No. 1.8e+02;
Conservative 1; Mismatches 529;
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Best Local Similarity
Matches 850; Conserv
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LENGTH: 153142
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-TCAACCTCCGTTCAGCTCACTGCAACCTCTCCCGGGTTCAAGYGATTCTCCTGCC
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publication No. US2005287544A1

GENERAL INFORMATION:

APPLICANT: BERTUCCI. Francois

APPLICANT: BIRNBAUM, Daniel

ITLE OF INVENTION: GENE EXPRESSION PROFILING OF COLON CANCER WITH DNA ARRAYS

FILE REFRENCE: 1423-R-03

CURRENT APPLICATION NUMBER: US/11/000,688

CURRENT APLICATION NUMBER: US 60/525,987

PRIOR APPLICATION NUMBER: US 60/525,987

PRIOR FILING DATE: 2003-12-01

NUMBER OF SEQ ID NOS: 1596

SOFTWARE: PALENTIN Version 3.2

LENGTH: 3990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial sequences:primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.8%; Score 341; DB 17; Length 3 llarity 57.5%; Pred. No. 2.6e+03; Conservative 1; Mismatches 541; Indels
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1 LOCATION: (1)..(3990)

1 LOCATION: (1)..(3990)

1 LOCATION: cytochrome c, somatic(CYCS) gene.

US-11-000-688-1000
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Best Local Similarity
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